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ABSTRACT

The Early Intervention for School Success (EISS) program was designed to provide developmentally appropriate instruction in kindergarten and first grade classrooms, by providing the knowledge and skills that teachers and parents need to insure that children in California schools remain happy about learning. This goal is achieved by helping teachers to identify children's learning styles and strengths, focusing a small portion of each day on individual learning needs, and encouraging a diagnostic teaching style. The program rests on the successful implementation of six key program components: team screening, team conferencing, educational planning, developmental instruction, parent involvement, and evaluation. During the 1988-89 year, 56 new schools implemented the program, serving 6,991 students in 243 classrooms. Child study teams composed of classroom teachers and support staff were trained in each school, and schools were monitored through written reports and visits to each site. Research and evaluation efforts were continued in three broad areas: (1) reliability and validity studies of program-developed screening instruments; (2) longitudinal studies of program effect; and (3) evaluation of progress toward project goals. Results of the most recent evaluation are reported in detail, including student achievement goals, cost benefits, and teacher response. (TE)

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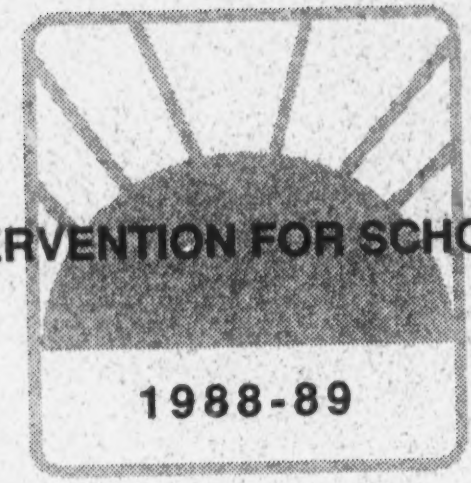
REPORT TO THE LEGISLATURE



EARLY INTERVENTION FOR SCHOOL SUCCESS

1988-89

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The major work of early childhood is play. The work of early childhood educators is to give that play purpose and direction. Early Intervention for School Success is dedicated to helping teachers guide the magic of learning. The program can be judged a success in so far as it helps nurture children's innate need to grow, to learn about and to master their enlarging world.

Dean Hiser, Project Director
April, 1990

With appreciation to the schools whose timely collection of data made this possible:

Atwater ESD	Bellevue Elementary
Bakersfield City SD	Voorhies Elementary
Bear Valley USD	North Shore Elementary
Capistrano USD	San Juan Elementary
Chatom USD	Mountain View School
Conejo Valley USD	Conejo Elementary
Corona -Norco USD	Sierra View Elementary
	Adams Elementary
Davis JUSD	Pioneer Elementary
	Valley Oak Elementary
Del Norte USD	Joe Hamilton Elementary
Elk Grove USD	Foulks Ranch Elementary
	Mack Elementary
Empire USD	Sipherd Elementary
	Empire Elementary
Fowler USD	Malaga Elementary
	Marshall Elementary
Lemon Grove ESD	Golden Avenue Elementary
Long Beach USD	Edison Elementary
	Roosevelt Elementary
	Whittier Elementary
Natomas USD	American Lakes Elementary
	Jefferson Elementary
Oxnard SD	Marina West Elementary
Riverside County	Murrieta Elementary
	Avaxat Elementary
Rowland USD	Yorbita Elementary
Saddleback Valley USD	Santiago Elementary
San Leandro USD	Wilson Elementary
Stockton USD	McKinley Elementary
Ukiah USD	Nokomis Elementary
Victor ESD	Park View Elementary
Willits USD	Brookside Elementary

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HIGHLIGHTS OF THE THIRD ANNUAL REPORT TO THE LEGISLATURE

EARLY INTERVENTION FOR SCHOOL SUCCESS 1988-89

MANDATE

- SB1256 (Watson), Chapter 1530, Statutes of 1985

PURPOSE

- To provide teachers and parents with the knowledge they need for their children to be successful.
- To encourage developmentally appropriate instruction in kindergarten and first grade classrooms and to ensure that children are happy about learning.

MAJOR ACTIVITIES

- 108 schools are in their second or third year. 86% of schools initiating the program have continued on their own funding.
- 181 schools implementing; 16,139 students served; 625 educators trained.
- Test instruments developed and validated in Spanish and translated into Vietnamese.
- Longitudinal and control group studies underway following over 2,000 children.
- 97 certified trainers available statewide.

STUDENT ACHIEVEMENT: FROM AT RISK TO SUCCESSFUL

- 16 months growth for 7 months of instruction among Spanish speaking children (Peabody Picture Vocabulary Test).
- 10 months growth for 7 months of instruction among English speaking children (Visual Motor Integration Test).
- Annual percentile gains for all groups on all measures range from 2 to 46 with a mean gain of 17 points over the three years of the program.

SAVINGS TO SCHOOLS AND THE STATE

- EISS is reducing kindergarten grade repeaters at a rate of 2 to 4 fewer per school per year. With only 2 fewer retentions per year a school would begin gaining over $3,000 per year in the program's fourth year when compared against the maximum interpretation of program costs.
- Reduced special education costs are anticipated as these students move through second and third grades. These changes would result in dramatic savings.

EXECUTIVE SUMMARY

PURPOSE

The Early Intervention for School Success Program is founded on the assumption that everyone can learn the next thing. It follows that the very complex work of teaching can be simply described. Teachers need to know two fundamental things: what does each of my students already know, and what is the next thing each needs to learn?

EISS offers teachers answers to both questions. Through a team screening of all children as they enter school, teachers gain early knowledge about who their students are as learners. Good teachers will gain much of this knowledge through instruction, but too much of it will be gained only after many months.

The second question is answered by a curriculum that addresses today's kindergartens. What to teach next is increasingly complicated by the widely disparate preparation of the children entering California schools.

NEED

Many children are not ready for the kindergarten that awaits them. Many teachers are not fully prepared to deal with groups of children whose abilities span seven years.

It is increasingly common to find groups of children entering our schools with widely varying abilities and levels of preparation. Some are two or three years old in terms of readiness, others are six or seven. Teachers must meet the needs of some children who are ready for long periods of academic activity. They must also guide and teach those who want and need to play and who find it impossible to do pencil and paper tasks.

Many things have contributed to this changing population. Among the most important are diverse backgrounds, changing family structures, an increase in the number of working mothers, and increasing academic demands in our schools. Schools cannot change the society, but they can provide an appropriate curriculum. Schools can provide teachers with the knowledge and tools needed to provide for this wonderfully varied and challenging group of children.

GOAL AND KEY COMPONENTS

Early Intervention, an adaption of the Early Prevention of School Failure Program, is helping schools meet these varied needs. In the words of National Program Director, Luceille Werner, "This program provides teachers and parents with the knowledge and skills needed to help children be successful and happy about learning."

The goal of the program is to insure that children remain happy about learning. It is achieved by helping teachers identify children's learning styles and strengths, focusing a small portion of each day on individual learning needs and encouraging a diagnostic teaching style. The process helps improve classroom management and also involves parents in the curriculum. The program rests on the successful implementation of six key program components. Key components include: team screening, team conferencing, educational planning, developmental instruction, parent involvement, and evaluation.

MAJOR ACTIVITIES

- During the 1988-89 year, 56 new schools implemented the program serving 6,991 students in 243 classrooms.
- Child Study Teams composed of classroom teachers and support staff were trained in each school. A total of 625 educators were trained: 68 administrators; 301 support staff; and 256 teachers.
- Schools were monitored through written reports and visits to each site.
- Screening instruments were translated into Vietnamese.
- Research and evaluation efforts were continued in three broad areas: reliability and validity studies of program-developed screening instruments; longitudinal studies of program impact; and evaluation of progress toward project goals.
- The fourth grant competition was held in April of 1989. Forty-five implementation grants of $5,000 were awarded. Continuation grants of $1,000 were also awarded to the 24 previous year schools to expand and enhance their adoption of the program. With the awarding of grants for 1989-90, the program was introduced into 199 schools. The percentage of schools continuing the program after grant funding has ceased stands at about 86%.
- The fourth Trainer's Institute was held in June, 1989. Thirty-nine new trainer candidates completed five days of intensive training. They join the ranks of a continually growing network of certified trainers monitored and supported by EISS staff. Currently, there are 92 trainers active in the program located throughout California.

STUDENT ACHIEVEMENT

This program has reversed the negative expectations for children who were at risk of school failure. When children enter school without needed skills, when they are one or two years younger in their development than the "average" kindergartener, school is too often a frustrating and eventually defeating experience. Typically, at risk children have shown a decline in achievement compared to all other children.

Over a three year period, the EISS Project has demonstrated a reversal of the usual decline in performance of at risk students. Instead, EISS students who entered school at risk have shown gains in all areas, have closed the gap between their abilities and those of average students. On nationally standardized tests a majority of these children have moved, in their first year of school, from expectations of failure to average levels of achievement. A majority can no longer be said to be at risk. These gains, it is important to remember, are being made by children who enter school with fewer advantages than their peers.

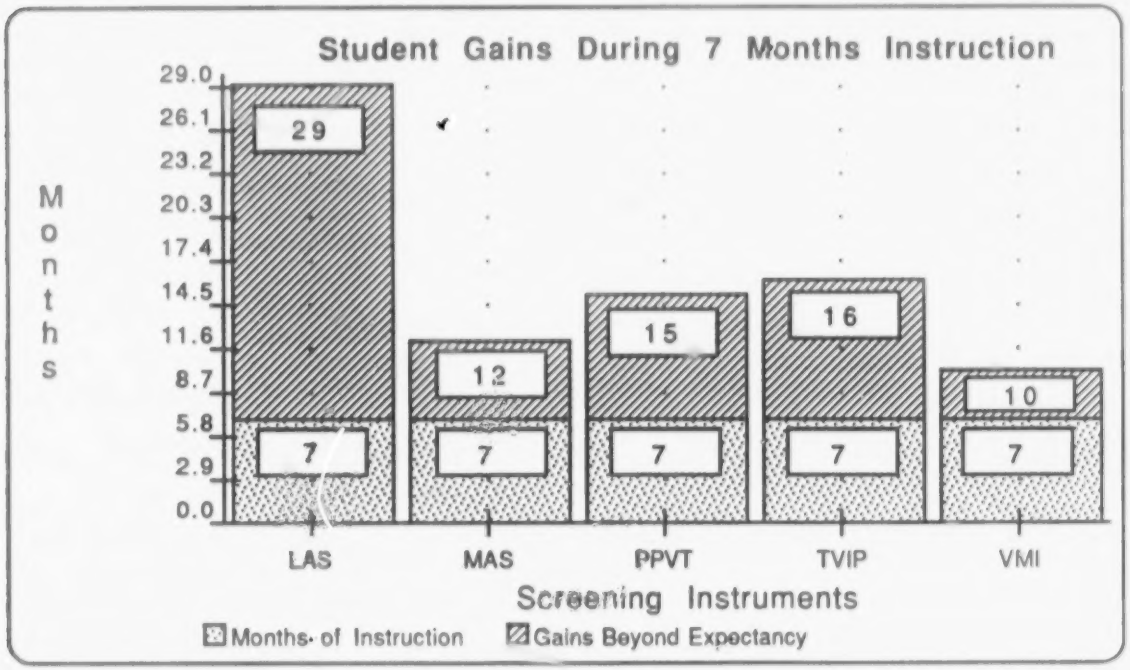
In 1988-89, a representative sample of 984 students was studied. The majority were considered to be at risk because they were entering school with skill levels a year or more below what was expected for their age. The group had the following characteristics:

- Minority ethnic background 58.3%
- Parents are unskilled or on welfare 41.5%
- Primary language other than English 41.7%
- Identified as limited or non-English proficient 39.3%
- Enrolled in Chapter 1 Programs 31.8%
- Preschool experience 46.4%

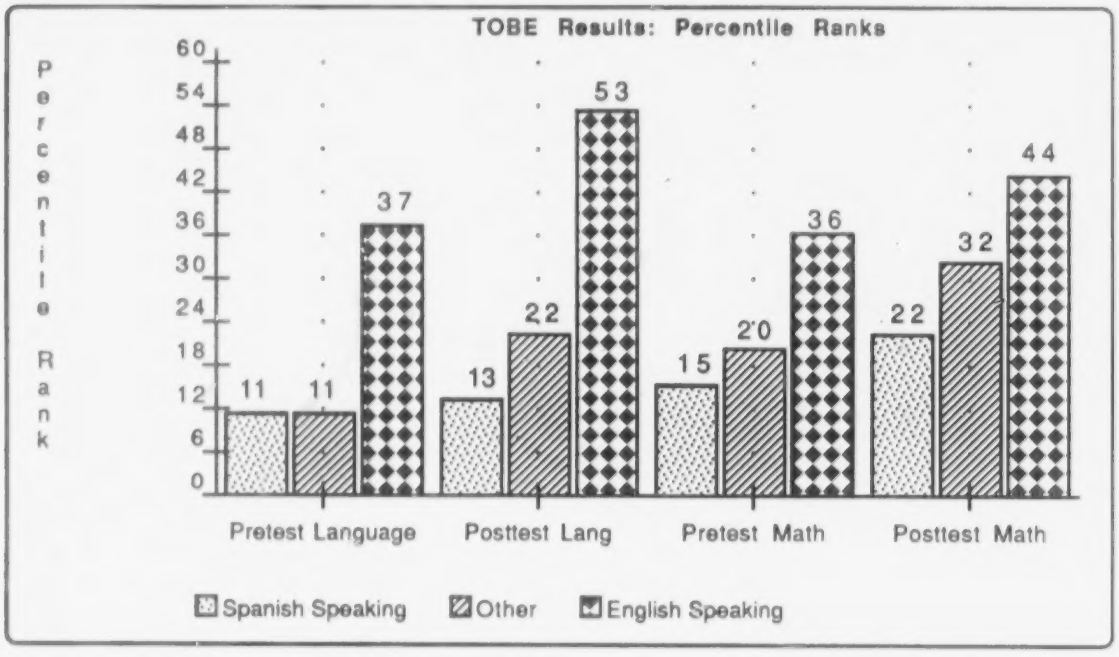
Comparing pre and post-test screening scores, student growth is illustrated in the table and graph below. Average gains from pre and post-tests are compared to the number of months of actual instruction.

ACHIEVEMENT GAINS FOR AT RISK CHILDREN

Test	Average gains during 7 months of instruction
Language and Auditory Scale (LAS)	2 years 5 months
Motor Activity Scale (MAS)	1 year
Peabody Picture Vocabulary Test	
English speaking (PPVT)	1 year 3 months
Spanish speaking (TVIP)	1 year 4 months
Test of Visual Motor Integration (VMI)	10 months



A nationally standardized achievement test, the Tests of Basic Experience, was given as a group test in Spanish and English to classrooms in the longitudinal study. Three primary language subgroups are reported. Gains ranged from 2 to 16 percentile ranks.



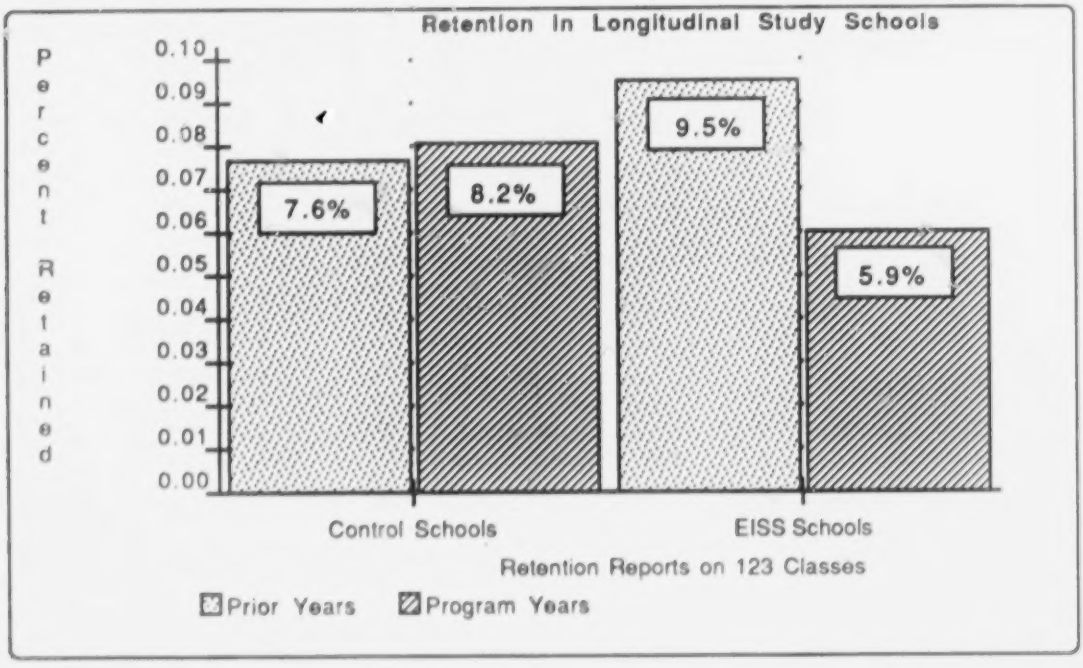
Summary of Student Achievement

For the three years in which data has been collected all subgroups have made significant gains during their kindergarten year on all the measures used for screening. The smallest gain shown on a nationally standardized screening instrument was a two percentile gain made by 1988-89 Spanish speaking kindergarteners on the language subtest of the TOBE. This same group made gains of from 13 to 26 percentiles on the other instruments. The greatest gain shown was 46 percentiles on the VMI by 1987-88 English speaking kindergarteners. The median percentile gain was 13 percentiles ranks. The total sample over the three years is 2,397 students.

The School Readiness Task Force called retention in grade a growing problem. The practice is disturbing because the research literature overwhelmingly demonstrates that children who are held back do less well than promoted children on all measures of academic success as well as in attitudes about themselves and school. (Holmes and Mathews, 1987. Smith and Shepard, 1987.)

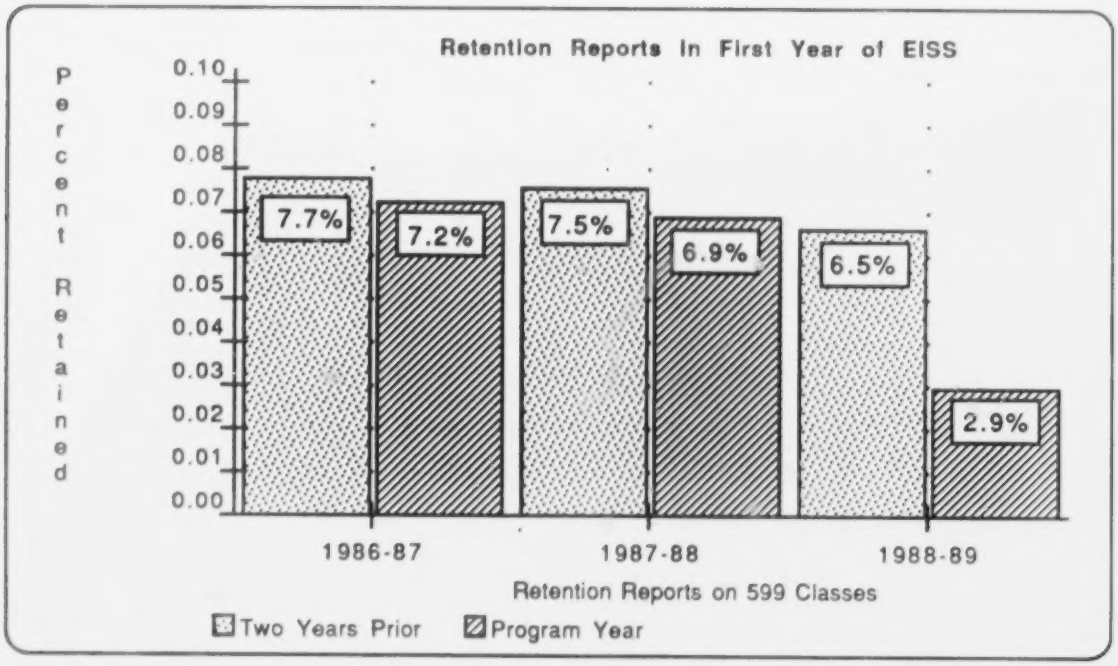
Reversing a Trend: Reducing the Number of Kindergarten Grade Repeaters

By helping teachers recognize the developmental needs of students and providing effective teaching strategies to meet all students needs, EISS is reversing a trend toward failure. In EISS schools, the numbers of children being held back is declining dramatically. In matched comparison schools, it is increasing. The rates illustrated below include three clusters of program and three clusters of non-program schools. The first clusters reported two years of experience prior to the program, 1984-85 and 1985-86, and three program years. The other clusters reported two prior and two program years or two prior and one program year. A total of 123 classrooms are included in this sample.



In each program year, new teachers have reported retaining fewer students after their first year in EISS than they did during the two prior years. The average reductions in rates of retention range from 0.55%, 1986-87 first year teachers, to 3.63%, 1988-89 teachers. When the three years of program experience are compared to the cumulative six years of pre-program experience reported, the 240 teachers report changing their rate of retention from 7.56% to 5.55% or 26.6% fewer students retained overall.

This sample includes 17,803 students over the years from 1984-85 to 1988-89. The schools are located in 98 districts distributed through 30 California counties. They represent all geographic areas and the wide demographic range of California students.



This large sample, considered together with the smaller sample of schools which have reported two and three years of experience in the program, indicates that EISS is succeeding in reducing the practice of retaining young children and is instead keeping them in their modal grade.

COST BENEFITS

The EISS Program can benefit schools, school districts, and the state of California in three areas: reducing the number of grade repeaters; reducing the number of potential dropouts; and reducing the number of special education placements. The savings to be realized from better informed and more appropriate instruction are large because the program is relatively inexpensive while the alternatives are very costly.

Program Costs

Total EISS costs per student range from $70 to $146 per student in the first year of implementation and drop to from $5 to $45 per child in subsequent years. The minimum costs include all State EISS expenses and direct local expenses such as materials, training, substitute time, and the costs of getting a teacher trained as a trainer in the first year. Maximum costs also include the daily rates for support staff members who are reassigned to assist with screening and conferencing. These people, usually the school psychologist, speech pathologist and resource specialist, are already employed by the district, but their reassignment may be regarded as a cost by the local district.

The average sized EISS school serves 108 kindergarten children. On a per school basis, total State and local costs range from a low of $7,537 to a high, when support staff reassignment is included, of $15,768 to introduce the program in the first year and from $525 to $4,725 to continue it in subsequent years.

Costs Compared

At a high of $146 per student, EISS costs, because it is a system used within existing classrooms, are well below Head Start costs of $2,445 per child (The Forgotten Half, 1988) and even less than Chapter I programs which are described as modest at $500 per student. (Slavin, 1987)

These comparisons become almost insignificant, and the wisdom of intervening early becomes dramatically apparent, when considering the costs of intervening late. Policy Analysis for California Education reported in the fall of 1989 that the California Partnership Academies are cost effective even though they expended $41,000 over three years to retrieve one high school dropout. This expenditure was justified by a potential societal benefit of $77,500 from returning one student to high school. At those costs, California could serve 281 children, more than 2 schools, using the EISS Program for the price of retrieving one high school dropout. If only one of these children were prevented from dropping out, the savings would pay for the program and profit the State $36,500.

Benefits

Multiple EISS studies indicate that teachers in the program are retaining fewer children in kindergarten than they did prior to implementing the program. Teachers in the longitudinal study schools who reported one to three years of experience in the program and two prior teaching years changed their retention rate from 9.45% to 5.95%. This change translates to about 4 fewer retentions per year in the typical school of 108 kindergarteners. Teachers in their first year of the program averaged over all three program years, changed their retention rate from 7.18% to 5.55%, a change of about two fewer retentions per year in the kindergarten group of 108 children.

If this smaller change were the only eventual benefit of the program, EISS would pay for itself and begin returning savings to the State in a few year, even when considering support staff as a direct cost. As is illustrated in the summary table below, the savings from holding back only two fewer children in a school each year exceeds the maximum possible program costs in the third year.

However, these figures are based on one change in a static world. If two fewer children are held back each year, fewer dollars will be spent educating them. The sad reality is that children who are held back one year are twice as likely to drop out of school. (National Center for Education Statistics, 1988) They then are not the object of those education dollars, but are more likely to become a comparatively enormous cost to the larger social fabric. If the reduced retentions in grade eventually result in only one child from every third EISS year becoming a dropout, the program will produce very large savings.

Another cost benefit should arise from reduced placements in special education as EISS students move on through second and third grades. A small sample of children from the 1986-87 classes have been followed through their second grade year and in that year 5% fewer were placed in special education than were students in comparison classes. However, the sample size of about 300 children is too small to be definitive. It is expected that early school success will result in fewer placements over time. Larger groups of children from later years are being followed to substantiate the program's impact on second and third grade experience.

This expected effect must be balanced against a slight increase in special education from the kindergarten class itself. First year EISS teachers report an increase in kindergarten placements of about three tenths of one percent. Early special education intervention is also less costly in the long run, though accounting for this effect will take several more years.

In order to assess the potential short run benefits, the following scenarios illustrate the savings from a small special education placement reduction. In these scenarios, two fewer children among a group of 108, could, in and of itself, quickly save more than the maximum cost of the program. The figures draw a picture of costs for three classes: one before EISS, the first year of EISS, and a year following EISS. After the most expensive first year of EISS, the subsequent classes would return a savings of $15,620 over the same years.

In the following scenarios, the regular education cost is the 1988 California base figure of $3,880 per child. Added costs are $1,349 per child for part time special education. A full day special education placement costs $7,819 per child or $3,939 more than the regular class placement. The following table illustrates the added costs.

AVERAGE COSTS OF INSTRUCTION

Regular Class	$3,880
Regular Class with part time special education	$3,880 + $1,349
Special Day Class full time	$3,880 + $3,940

TABLE 53
FIVE YEAR COST SCENARIOS FOR 108 CHILDREN (Dollars in 1000's)
Year One: Grades K-4, No EISS

Program	K	1st	2nd	3rd	4th	Total
Regular Classroom Instruction @$3,880	419	419	419	419	419	2,095
3 Children Placed In Special Day Class @ added cost of $3,939		11.8	11.8	11.8	11.8	47.2
7 Children Receive Special Education RSP or DIS @$1,349		9.4	9.4	9.4	9.4	37.6
Total Five Year Cost						**$2,179,800**

Year Two: Grades K-4, EISS Introduced in K (Dollars in 1000s)

Program	K	1st	2nd	3rd	4th	Total
Regular Classroom Instruction	419	419	419	419	419	2,095
EISS in Kindergarten	15.8	----*	-----	-----	-----	15.8
2 Children in SDC		7.98	7.98	7.98	7.98	31.92
6 Children need Special Education RSP or DIS		8.09	8.09	8.09	8.09	32.36
Total with EISS						**$2,175,080**
Net Savings						**$ 4,720**

*There is no EISS Program cost for this class after the year of intervention.

Year Three: Grades K-4 of Second EISS Class (Dollars in 1000s)

Program	K	1st	2nd	3rd	4th	Total
Regular Classroom Instruction	419	419	419	419	419	2,095
EISS in Kindergarten	4.7	----*	-----	-----	-----	4.9
2 Children in SDC		7.98	7.98	7.98	7.98	31.92
6 Children need Special Education RSP or DIS		8.09	8.09	8.09	8.09	32.36
Total with EISS						**$2,164,180**
Net Savings						**$ 15,620**

*There is no EISS Program cost for this class after the year of intervention.

Classes of EISS children and their counterparts from the kindergarten classes of 1986-87 and 1987-88 are being followed closely. Over the next three years, the program could show a significant cost benefit if only one or two children among 108 did not require special education placements.

A COST BENEFIT SUMMARY

EISS Costs per School

	Average Costs				Maximum Costs	
	Grant	State Support	Local Contribution	Subtotal	Support Staff Time	Subtotal
First Year	5,000	2,500	525	8,025	4,200	12,300
Second Year	1,000	0	525	1,525	4,200	5,800
Subsequent Years	0	0	525	525	4,200	4,800
Totals for Three Years				**$10,075.00**		$22,675.00

Possible EISS Benefits per School

	Expected Benefits			Possible Benefits	
	Reduced Retentions	Special Education	Subtotal	One Dropout Prevented	Subtotal
First Year	7,760	2,698	10,458	77,500	87,958
Second Year	7,760	2,698	10,458	--	10,458
Subsequent Years	7,760	2,698	10,458	--	10,458
Totals for Three Years			**$31,374.00**		$108,874

WHY IS THE PROGRAM EFFECTIVE?

Early Intervention for School Success provides support to teachers that is fundamental to their work. The screening provides a learning profile of each child and a profile of the class. The Skills Checklist provides a developmentally sequenced curriculum framework that extends down to age three. These crucial child development milestones are often missing from district expectancies and commercial resources. Yet, 30% to 40% of all our kindergarten children require this instruction. Finally, all of the curriculum materials are reusable and organized to make instruction experiential, progressing from concrete to the abstract application in each skill area. These materials help teachers broaden their repertoire of appropriate activities at every level of readiness.

WHAT TEACHERS SAY ABOUT EISS

- "EISS supports curriculum modifications needed in our classrooms."
- "It is complete. All the components of an instructional program are there."
- "It is appropriate for all children. It addresses those at risk and the talented."
- "The emphasis on modalities helps teachers see the whole child and the differences between children."
- "It is measurable and it provides a developmentally appropriate curriculum."
- "The program helps with classroom management."
- "EISS helps us meet the recommendations of the School Readiness Task Force."
- "It helps us communicate with parents and get them involved."

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EARLY INTERVENTION FOR SCHOOL SUCCESS

REPORT TO THE LEGISLATURE
1988-89

Submitted
April, 1990

I. INTRODUCTION

A. PURPOSE

Early Intervention for School Success (EISS) was established by Senate Bill 1256, (Watson) Chapter 1530, Statutes of 1985, in response to the numbers of public school pupils enrolled in kindergarten who were at risk of school failure. The Legislative intent was threefold: first, to establish a system to identify pupils of the ages of four to seven years, inclusive, who may be at risk; second, to implement appropriate instructional programs to reduce the frequency and severity of learning disability for these pupils in later years; and, third, to reduce the likelihood that these pupils will be placed in remedial programs with higher costs.

Early Intervention for School Success rests on the assumption that everyone can learn the next thing. It follows that the complex work of teaching can be very simply described. Teachers need to know two fundamental things: what does each of my students already know, and what is the next thing each needs to be taught?

EISS offers teachers answers to both questions. Through a team screening of all children as they enter school, teachers gain early knowledge about their students. Good teachers will discover much of this knowledge through their instruction, but too much of it will be gained only after the kindergarten year is half gone.

The second question is answered by a curriculum that addresses today's kindergartens. What to teach next is increasingly complicated by the widely disparate preparation of the children entering California schools.

B. GOAL

The goal of the program is to assure that children are successful in school and remain happy about learning.The principle objective of this program is to demonstrate that school failure can be prevented through early identification of preacademic learning needs and careful planning for developmentally and individually appropriate instruction. This objective is achieved by the successful implementation of six key program components. EISS intends to fund the program in 200 representative California schools and to study the effects of the program.

C. KEY PROGRAM COMPONENTS

Team Screening

All incoming four, five, and/or six year old students are screened in five modality areas (language, auditory, visual, fine and gross motor). Health, vision, and hearing may be assessed concurrently. Screening is done by professionals as a team effort for the purpose of improved instructional planning.

Team Conferencing

Observations, screening scores and parent information are compiled and evaluated. Appropriate educational recommendations are made regarding each child's learning style and any special needs. Referral for further diagnostic evaluation may be determined.

Educational Planning
A skills checklist of 52 critical and observable skills that are prerequisite to reading and writing success are the foundation for planning concrete, semi-concrete, and abstract learning activities. A series of curriculum resources coded to the skill checklist enable the teacher to plan developmentally appropriate lessons at each child's individual level of development.

Developmental Instruction
Teachers provide at least 20-30 minutes of daily small group instruction for identified need groups. The following teaching strategies can be used: direct modality instruction; unit/theme teaching; correlated curriculum; reinforcement centers; and parent tutoring. Instruction at the child's level of readiness creates a positive climate where children succeed and are eager to learn. Teachers are assisted to review and organize effective use of time, space, staff, and materials. The management system provides a choice of format for simplified record keeping. Training also assists teachers in providing learning centers for student directed learning and appropriate whole group instruction.

Parent Involvement
Program materials are designed to encourage parents to become knowledgeable about the program, to volunteer in the classroom and/or work with their child at home.

Evaluation
Evaluation is multifaceted. Pre-screening/post-screening data measures the impact on students. Program evaluation determines how components can be modified to yield maximum results. The EISS adopting schools take part in a five-year longitudinal study to measure the long-term effects on rates of retention in grade and referral to special education.

D. NEED FOR THE PROGRAM

As indicated in the EISS Trainer's Manual, "A Rationale for Early Intervention" by Byron Cook, 1987), the following needs have been identified among the California kindergarten population:

- When kindergarten children arrive to start school:
  - 38% will have been in some type of preschool program; some since birth.
  - Over half will have either a single parent working or both parents working.
  - Almost 20% will have been subjected to some type of abuse.
  - There will be a seven year developmental range within the group.
  - A high percentage will have a two or three year developmental lag in the language, auditory, and/or visual area.

- Only seven percent of the entering class fit the perception of the typical kindergarten child of 30 years ago: a child from a nuclear family. Of the other 93%:

  -14% are illegitimate.

  - 30% are latchkey children.

  - 20% live at or below the poverty level.

  - 5% speak another language.

  - 5% have physical or mental handicaps.

  - 10% have poorly educated parents.

  - 33% have moved twice in the last three years.

  - 40% will be living with a single parent by age 18.

  Based on the data collected for the submission of the original grant proposal by the Orange County Department of Education, the following conditions existed:

- In California, 81,859 students will experience developmental lags that will seriously impair their learning and adjustment to school. During their early years, these children who are to varying degrees unready will have difficulty in school but most will never be eligible for special education services. (Orange County and State Department of Education Pupil Count, December, 1984)

- In California, 167,277 or 77% of the Hispanic students between the ages of 4 and 7 years are below grade level and are potential recipients of special individualized services. (Ibid. and Special Education Reform Issues Papers, April 25, 1984)

- Retention is being recommended for 15% percent of California's kindergarten students each year. These students are not meeting society's expectations at a very young age. (EISS Survey of program and non-program schools, 1986-88.)

II. MAJOR PROJECT ACTIVITIES

A. ADMINISTRATIVE START-UP, 1986

The Early Intervention for School Success (EISS) Program was begun during the spring of 1986. The Project Director, Specialist, and secretary were selected. A $5,000 grant competition was organized. Information and application packets were mailed to each elementary school principal in California. A new language screening tool was written and the motor activity scale was revised. Nineteen districts were selected to be funded as the first year implementors of EISS in California. During the last week of June, 1986 twenty-eight educators were trained to be EISS trainers.

B. GROWTH IN THE NUMBER OF SCHOOLS PARTICIPATING

Each year EISS has initiated the program in new schools by providing $5,000 grants for first year implementation with $1,000 continuation grants offered in the second year. Each first year school is asked to send a teacher to be trained and certified as an EISS trainer at the end of the first year, making program expansion and continuation in the district less expensive and more easily available. Continuing and expanding the program requires a commitment of money, time, and leadership. In order to conduct four or five days of screening each fall, provide substitute costs for classroom teachers, and the reallocation of support staff time to help teachers screen and plan, schools must be convinced that the program is educationally worthy and cost effective.

Telephone interviews with each funded school were conducted in September and October of 1989. They provide a current picture of the size of the program and how committed schools are to continuing the program after grant funding ceases. These interviews also give insights into the elements of success and failure at the local school level.

TABLE 1
GROWTH IN THE NUMBERS OF EISS SCHOOLS

Year	Grants Awarded	Dissemination Schools	Discontinued
1986-87	19	27	- 2
1987-88	27	18	- 7
1988-89	24	28	- 6
1989-90	45	11	0
	115	84	-15

Total grants awarded	115
Total dissemination schools	84
Total schools which began the program since 1986-87	199
Less schools receiving grant funds in 1989-90	-73
Total schools dependent on local funds	126
Less schools which have discontinued	-15
Continuations with local funding	111
Percent of schools continuing at local expense	85.7%

Analysis

Interviewees volunteered these statements about what has made the program successful in their schools:

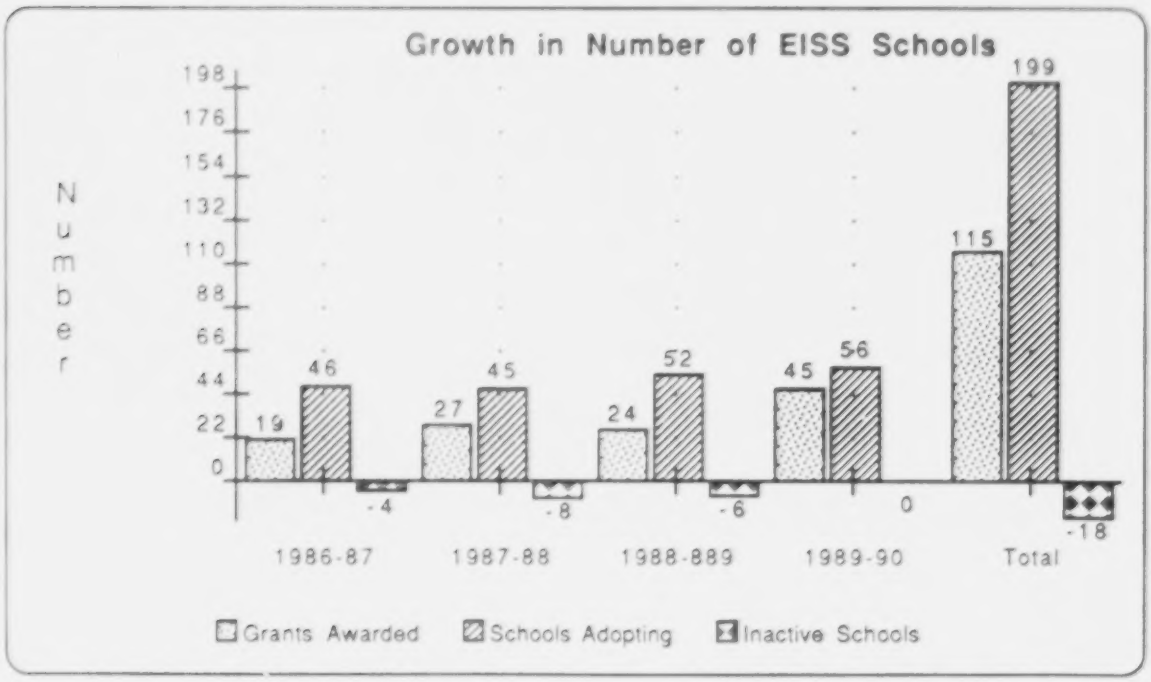
- We believe that EISS can make a difference in the kindergarten curriculum.
- We have strong trainers active in our district.
- Principals and staff members are doing awareness presentations throughout our district and county.
- New staff members are trained by existing staff.
- EISS supports curriculum modifications which our classrooms needed.
- EISS supports variations in the screening times (late summer and early fall) to fit our district calendar.

The following negative comments indicate problems encountered by some schools:

- The program requires too much training for new staff coming into an existing program.
- Change of personnel left too much of a void to continue the program.
- The new administration is not supportive.
- The district will not support substitute costs and resource personnel time for screening.
- When grant money runs out, district support is not strong enough to continue.

In summary, 108 schools have found the resources to continue the program after or without EISS grant funding. Eighteen schools have discontinued all or major parts of the program. Another 73 are currently being supported by grant funding. The rate of successful continuation for a least one and up to three years after funding ceases stands at 85.7%.

FIGURE 1



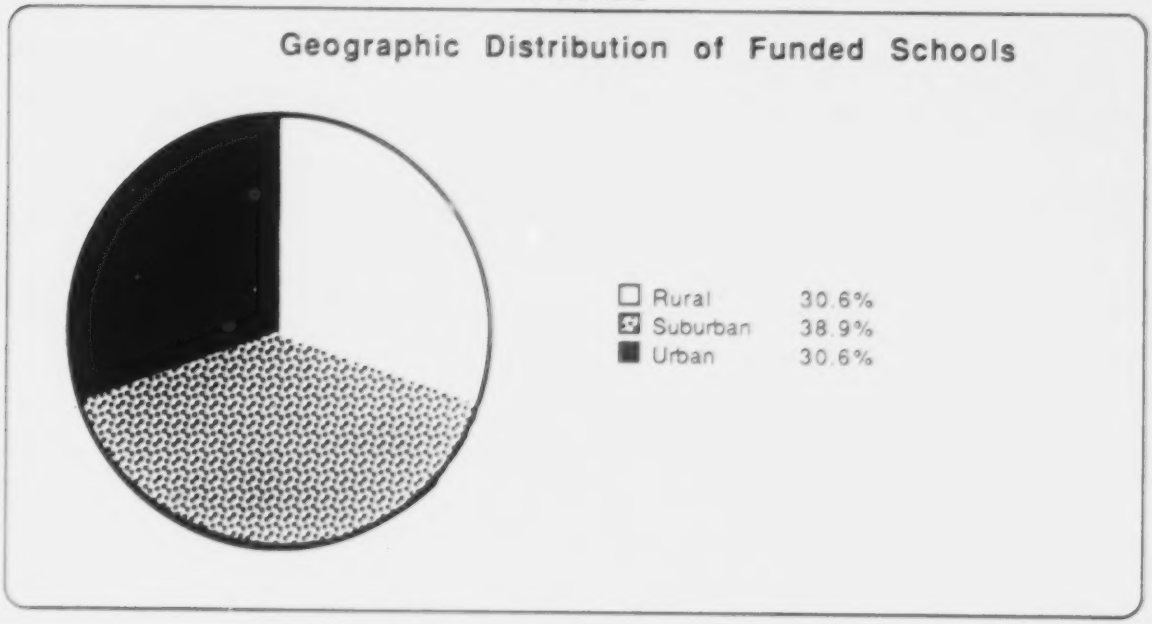
C. MAJOR PROGRAM ACTIVITIES, 1988-89

During the third year of program implementation, EISS administered 24 new implementation grants of $5,000 each. Thirty-five schools initiated the program using these grants. Another seventeen schools joined the program using local funds. The program also administered 24 continuation grants of $1,000 each to 1987-88 schools.

Geographic Location

Schools funded in 1988-89 represented the following geographic distribution: 11 were rural, 11 were urban, and 14 were suburban. Figure 2 illustrates this distribution.

FIGURE 2



Socioeconomic Status of 1988-89 Schools

Based on a socioeconomic status rating using a 1-3 scale (1=unskilled workers, 2=skilled workers, and 3=professionals) the participating schools had a socioeconomic status range from 1.21 to 2.82. The mean socioeconomic status figure for 1988-89 funded schools was 1.89.

Personnel Trained

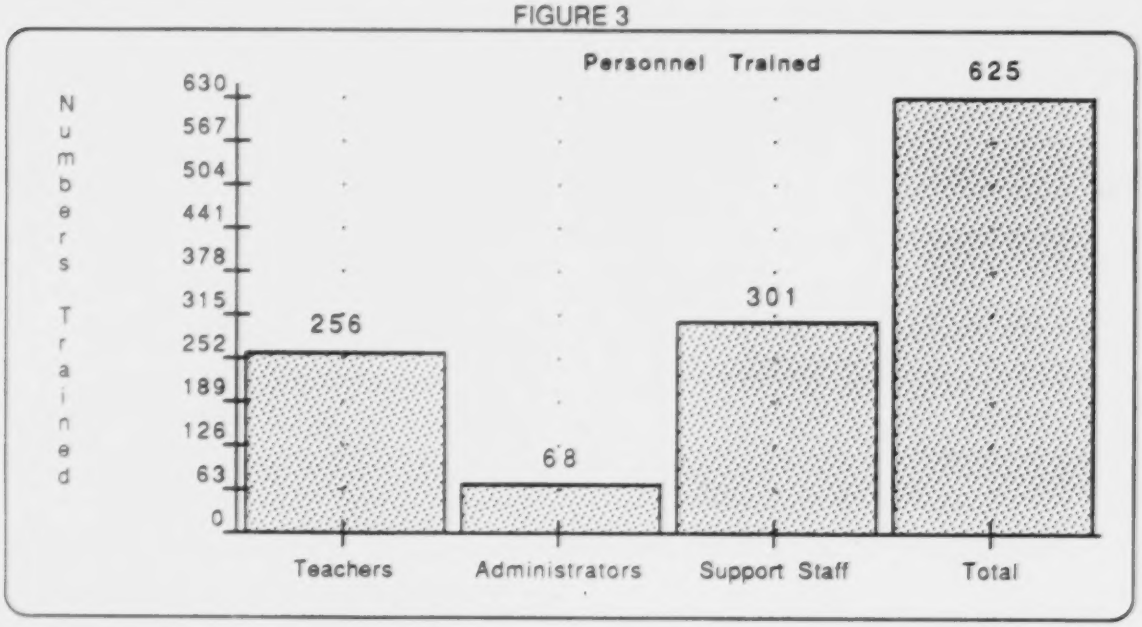
Child Study Teams composed of classroom teachers and support staff were trained in each funded school and each dissemination school while continuing schools reported training a few new staff members. A total of 625 educators were trained: 68 administrators; 256 support staff; and, 301 teachers. The last number includes 42 first grade teachers, the majority trained in second year schools. Personnel trained is illustrated in Table 2 and Figure 3.

TABLE 2

PERSONNEL TRAINED

Position	Number
Administrators	68
Teachers	256
Support Staff	301
Total	625

FIGURE 3



Background Information on 1988-89 Teachers

Teachers were asked to fill out a questionnaire describing their backgrounds. Table 3 presents the results from 84 teachers representing 25 schools funded by EISS in 1988-89.

TABLE 3

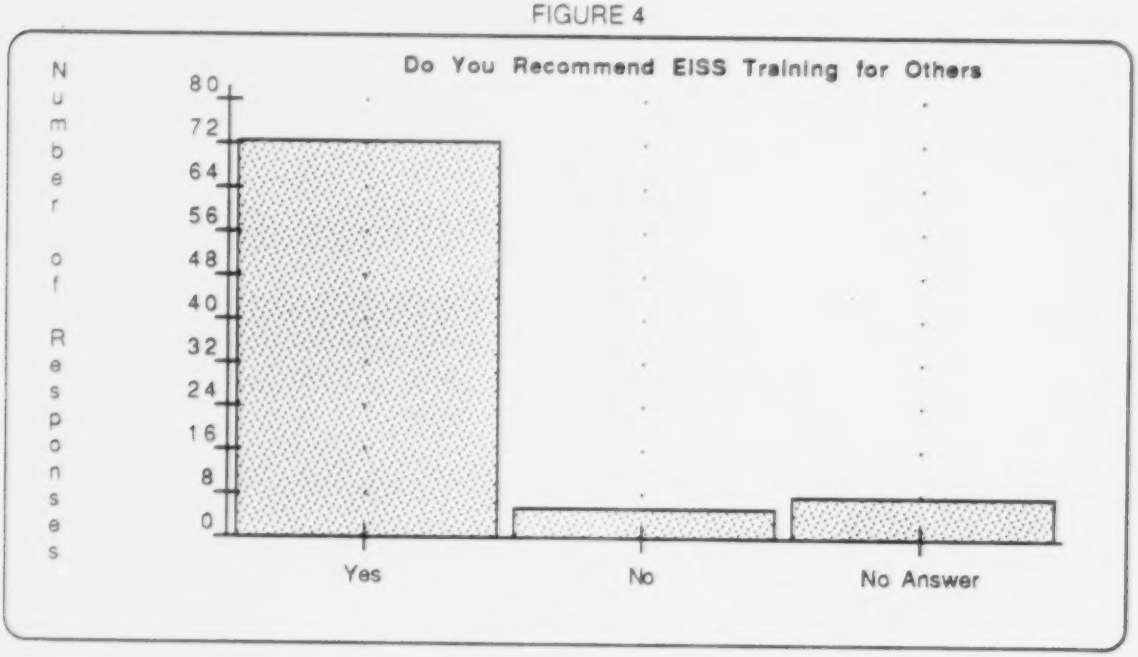
TEACHER BACKGROUNDS

Average years of teaching experience	12.83
Kindergarten/first combination teachers	4
Kindergarten teachers	77
Average years of kindergarten teaching	8.34
Hours of graduate training on average (range from 0 hours to 126 hours)	52.19
MA degrees	19
Bilingual teachers	11
Average hours of EISS training	18.57

Number of teachers reporting = 84

Figure 4 presents the distribution of responses to the question: "Would you recommend EISS training for other teachers?"

FIGURE 4



Other Activities

As was the case in 1986-87 and 1987-88, each of the 1988-89 funded schools were visited and monitored by the EISS office during their first implementation year. Program implementation was observed, technical assistance was given, and an evaluation of program fidelity was shared with the school staff verbally and in writing.

Research and evaluation efforts were continued in two broad areas: longitudinal studies of program impact; and, evaluations of progress toward project goals. A third project was initiated: a non-equivalent comparison study of student progress.

Forty schools completed most or all of the reports, an impressive response considering the quantity of data being gathered. Data was submitted by teachers and parents. Rates of retention and referral to special education were reported by teachers.

The third grant competition was held in April of 1989. Forty-five grants were awarded. Fifty-three schools were included in the funded applications. Letters of application were also invited from the 24 second year schools for $1,000 follow-up grants. These funds are used for training new kindergarten teachers, first grade teachers who are receiving "at risk" students, and for dissemination of the program within the local district.

The fourth Trainer's Institute was held in June, 1989. New trainer candidates completed five days of intensive training. Each had completed a year's experience with the EISS program and all were certified after conducting two days of practice training under observation by the EISS staff. Currently, 97 trainers have been certified and remain active in the program. They are located throughout California.

Staff development materials were added during the year and introduced to trainers at Trainers Institute. The implementation manual for adopters providing guidelines for program start-up and the screening and conferencing components unique to the EISS program was revised. Trainers also received inservice support materials including transparencies for overhead projection and a twenty minute video overview of the program as well as a new trainer's manual. Curriculum management materials were revised by the national EPSF office and were provided to all active trainers by the EISS office. Trainers were provided with data, presentation materials, and training regarding the recommendations of the School Readiness Task Force and a survey of research regarding retentions in grade.

Translations

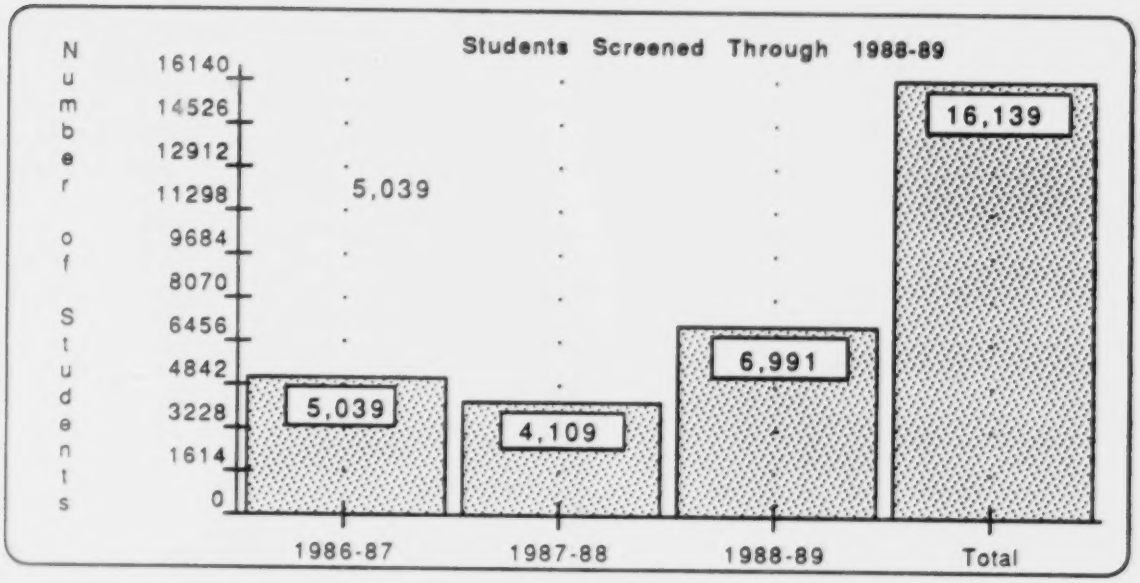
Project developed screening instruments, the Language and Auditory Scale, the Integrated Motor Activity Scale, and the Readiness Skills Checklist were translated into Vietnamese. These screening instruments, the Parent-Observation Form (for developmental histories), and the Parent Activity Cards are all available in English, Spanish, and Vietnamese.

Reliability and validity studies have yet to be conducted on the Vietnamese screening instruments. A student population of at least 150 in a fairly concentrated area within the program is needed in order to conduct such studies. In 1988-89, EISS service to this population was not yet large enough to attempt such a study. Reliability and validity studies of the English and Spanish versions of these instruments were completed in prior years.

D. NUMBERS OF STUDENTS

During the 1988-89 school year, child study teams reported screening 6,991 students in EISS schools. The EISS curriculum was implemented in 240 classrooms. Figure 5 illustrates the numbers of students screened by the program.

FIGURE 5



III. RESULTS: PROJECT IMPACT

A. STUDENT POPULATION PROFILE

A representative sample of 984 students was analyzed to assess project impact. Four hundred twelve (412) were participants in the longitudinal study. The following Tables and Figures provide data on the characteristics of the testing sample who were considered at risk students.

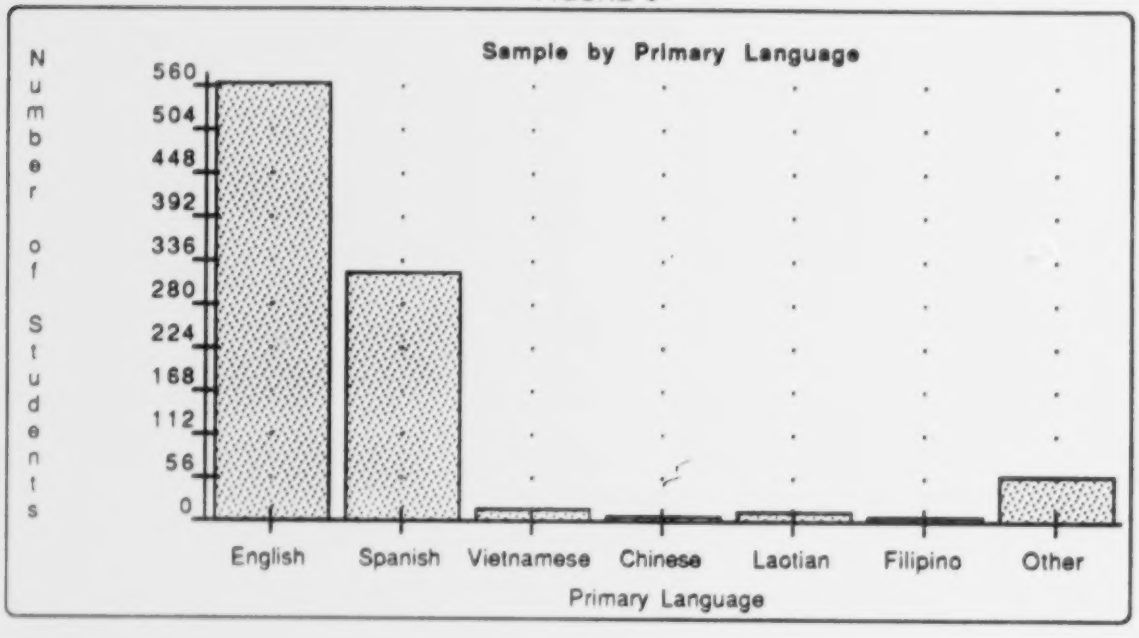
1. Primary Language

The screening sample is weighted somewhat more toward minority languages than is California's kindergarten population. For 58.3% of the sample, English is their primary language while for the total kindergarten population in California, the percentage is 67.8%. In the sample, Spanish is the primary language of 33.1% compared to 24.3% for the state. *For other minority languages, the sample percentages are very close to the statewide figures. *(California figures from the California State Department of Education, Bilingual Education Office, Spring, 1989.)

TABLE 4
PRIMARY LANGUAGE

Primary Language	Frequency	Percent	Cum. Percent	California Kindergarteners
English	559	58.3	58.3	67.8
Spanish	317	33.1	91.3	24.3
Vietnamese	11	1.1	92.5	1.2
Chinese	4	.4	92.9	.8
Laotian	8	.8	94.7	.04
Filipino	4	.4	94.2	.9
Other	55	5.7	99.9	5.1

FIGURE 6


Sample by Primary Language
Number of Students
560
504
448
392
336
280
224
168
112
56
0
English
Spanish
Vietnamese
Chinese
Laotian
Filipino
Other
Primary Language

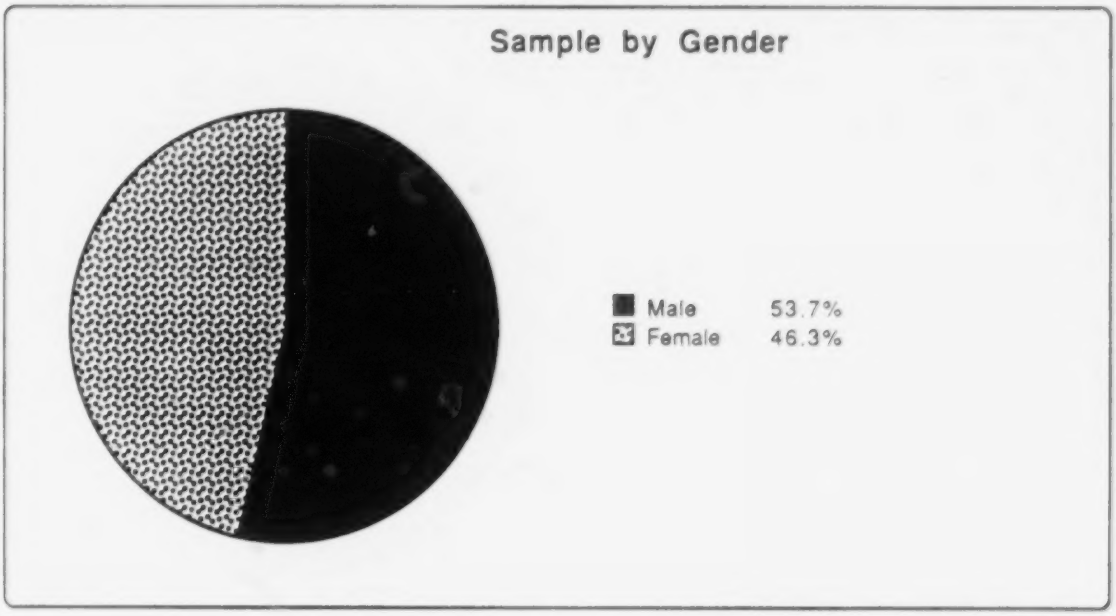
2 . **Gender**

The EISS sample population was made up of 53.7% male and 46.3% female population. In California, that ratio is 52.5% male and 47.5% female for Kindergarten students in public schools.

TABLE 5
GENDER

Sex	Number	Percent	Cum. Percent
Male	518	53.7	53.6
Female	447	46.3	99.9

FIGURE 7

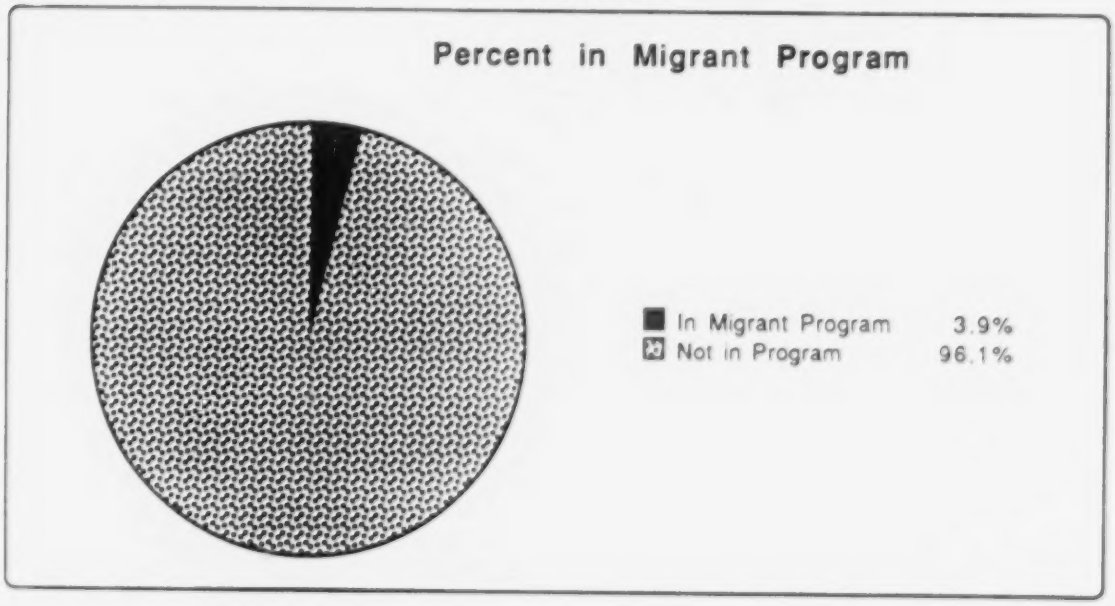


3. **Migrant Program**
Of 921 students in the sample, 3.9% were served by the migrant program. In California, 3.6% of students are enrolled in migrant education programs.

TABLE 6
MIGRANT PROGRAM PARTICIPATION

Migrant Program	Frequency	Percent	Cum. Percent
In Migrant Program	36	3.9	3.9
Not in Migrant Program	885	96.1	100.0

FIGURE 8



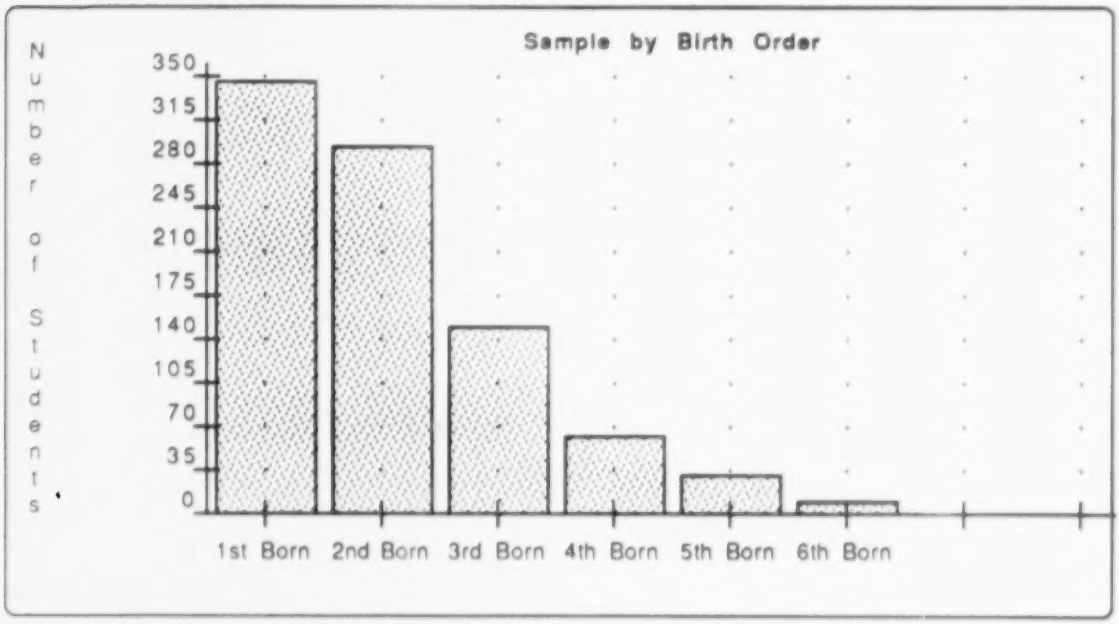
4. Birth Order

First born children made up 38.7% of this kindergarten age sample and second born 32.8%. Birth order data was not available for all California children. However, among all California children 40.4% live in one child families and 36.8% in two child families. (Conditions of Children in California, Policy Analysis for California Education, 1989.)

TABLE 7
BIRTH ORDER

Birth Order	Frequency	Percent	Cum. Percent
1st Born	344	38.7	38.7
2nd Born	292	32.8	71.5
3rd Born	148	16.6	88.2
4th Born	61	6.9	95.1
5th Born	30	3.4	98.4
6th Born	8	.9	99.3

FIGURE 9

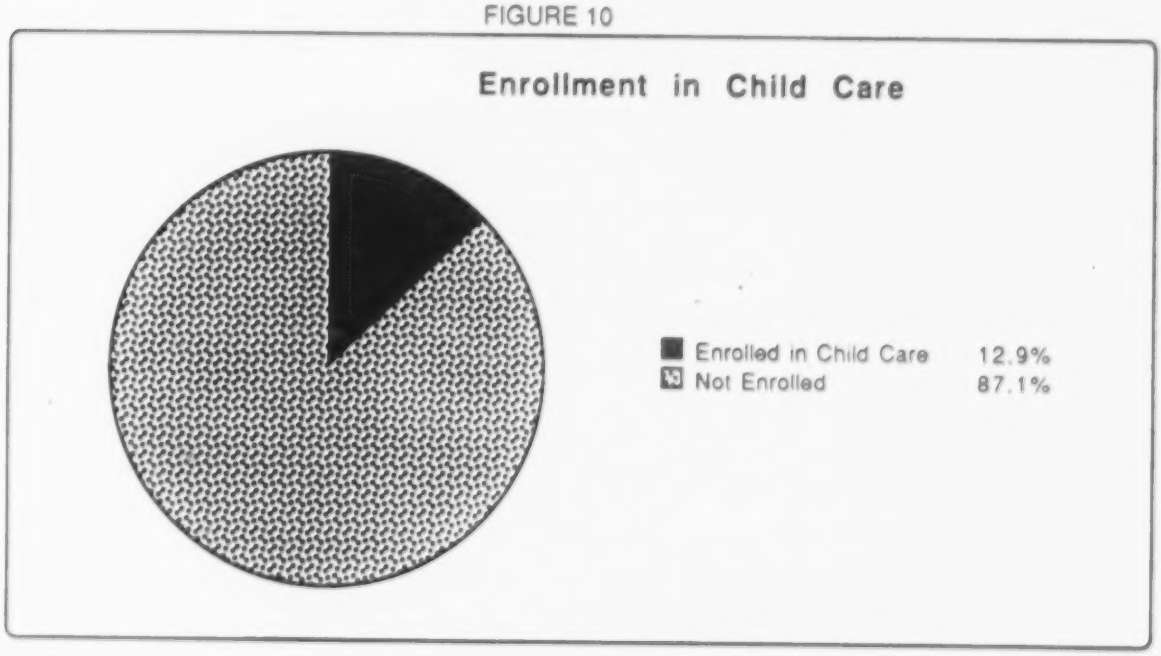


5. **Child Care Enrollment**
Of the total sample, one hundred seventeen children, 12.9% were enrolled in child care. In California, 15% of elementary children received center based child care. (Conditions of Children in California, Policy Analysis for California Education, 1989)

TABLE 8
CHILD CARE ENROLLMENT

Child Care	Frequency	Percent	Cum. Percent
Enrolled in Child Care	117	12.9	12.9
Not Enrolled in Child Care	790	87.1	100.0

FIGURE 10

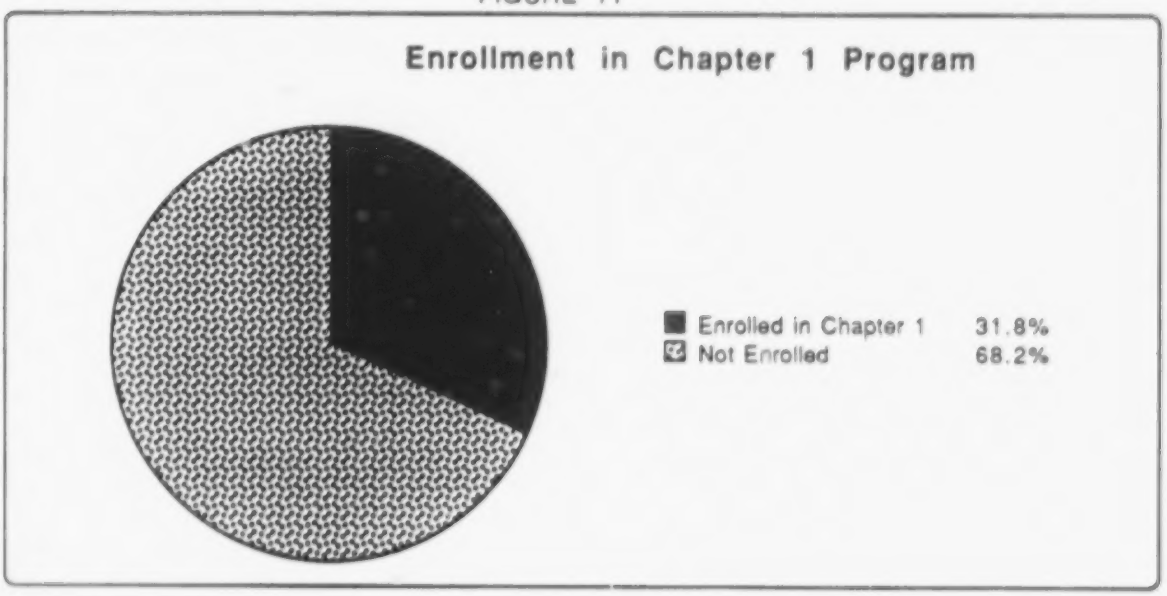


6. Chapter I.
Nearly one-third of the children, 31.8% were enrolled in Chapter I programs. Across the state, 22.31% are enrolled in Chapter I programs.

TABLE 9
CHAPTER I ENROLLMENT

Chapter I	Frequency	Percent	Cum. Percent
Yes	288	31.8	31.8
No	617	68.1	99.9

FIGURE 11



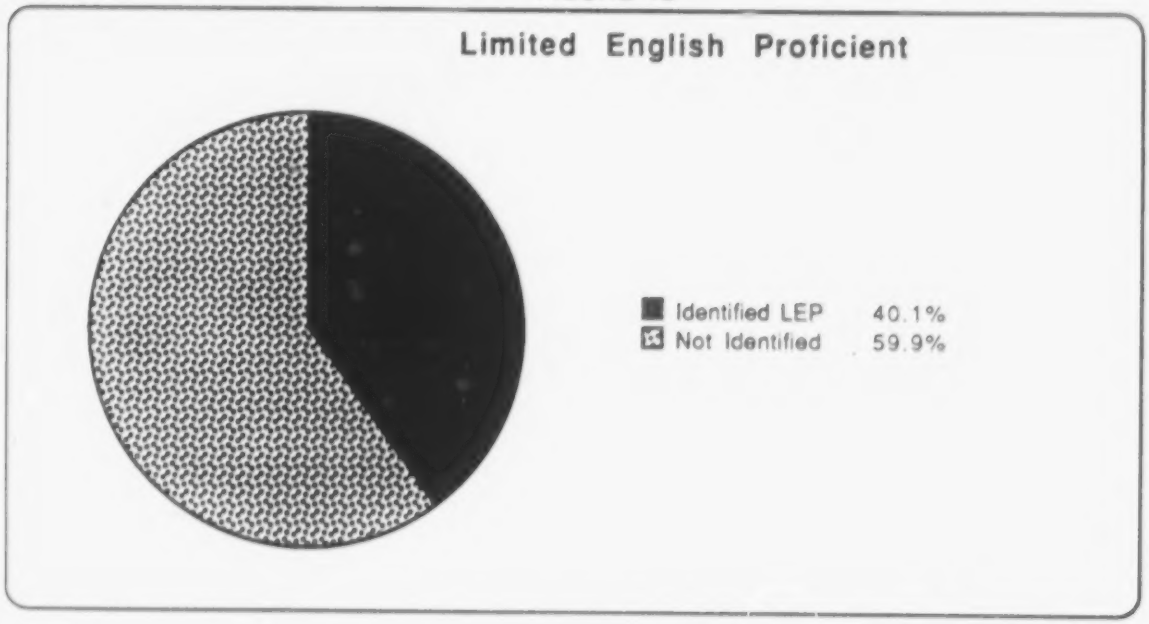
7. Limited English Proficiency

Just over 40% of the students have been identified as having limited proficiency in English by their local schools. Statewide, 32.57% of all kindergarten students were identified as LEP (State Department of Education, Bilingual Education Office).

TABLE 10
LIMITED ENGLISH PROFICIENCY

LEP	Frequency	Percent	Cum. Percent
Identified LEP	369	40.1	40.1
Not Identified LEP	552	59.9	100.0

FIGURE 12

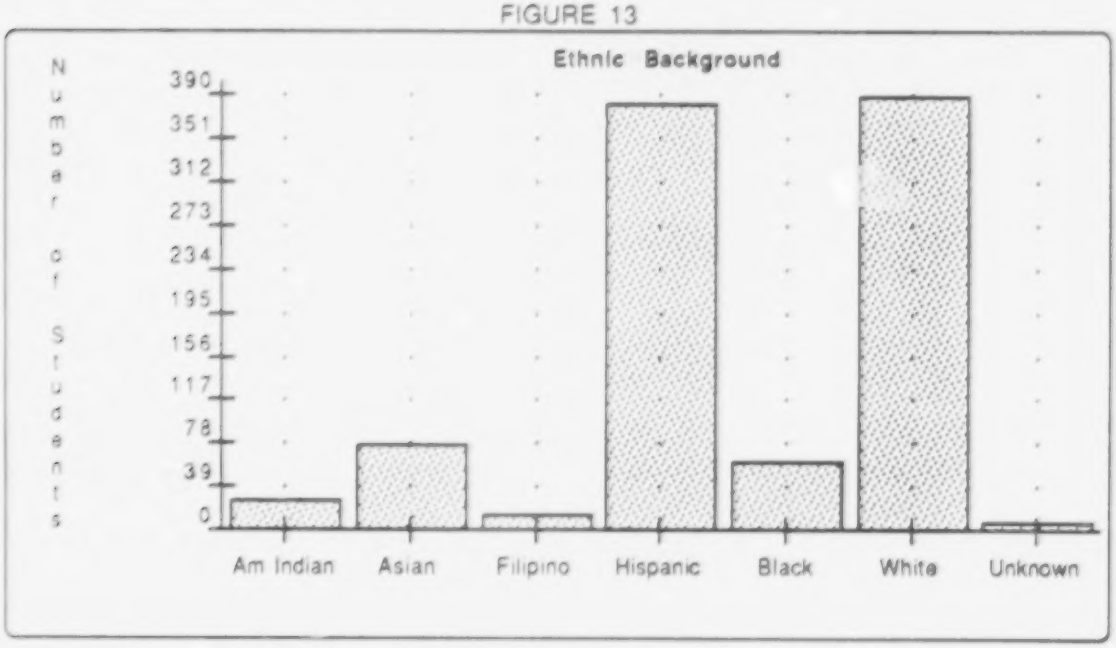


8. **Ethnic Background**
Within the screening sample, 41.2% were White, not of Hispanic origin; 40.4% were Hispanic; and, 6.3% were Black, not of Hispanic origin. In California, these percentages are 51.2%, 31.5%, and 7.2% respectively.

TABLE 11
ETHNICITY

Ethnic Background	Frequency	Percent	Cum. Percent
American Indian or Alaskan Indian	24	2.6	2.6
Asian or Pacific Islander	74	7.9	10.5
Filipino	10	1.1	11.5
Hispanic	379	40.4	52.0
Black-Not Hispanic Origin	59	6.3	58.3
White-Not Hispanic Origin	386	41.2	99.5
Unknown	5	.5	100.0

FIGURE 13



9. Preschool Experience

A little less than half, 47.1% of the sample had some preschool experience. Table 12 and Figure 14 below display the number of students in the total screening sample who had preschool experience.

TABLE 12
PRESCHOOL EXPERIENCE

Preschool Experience	Frequency	Percent	Cum. Percent
Had Preschool Experience	402	47.1	47.1
No Preschool Experience	452	52.9	100.0

FIGURE 14

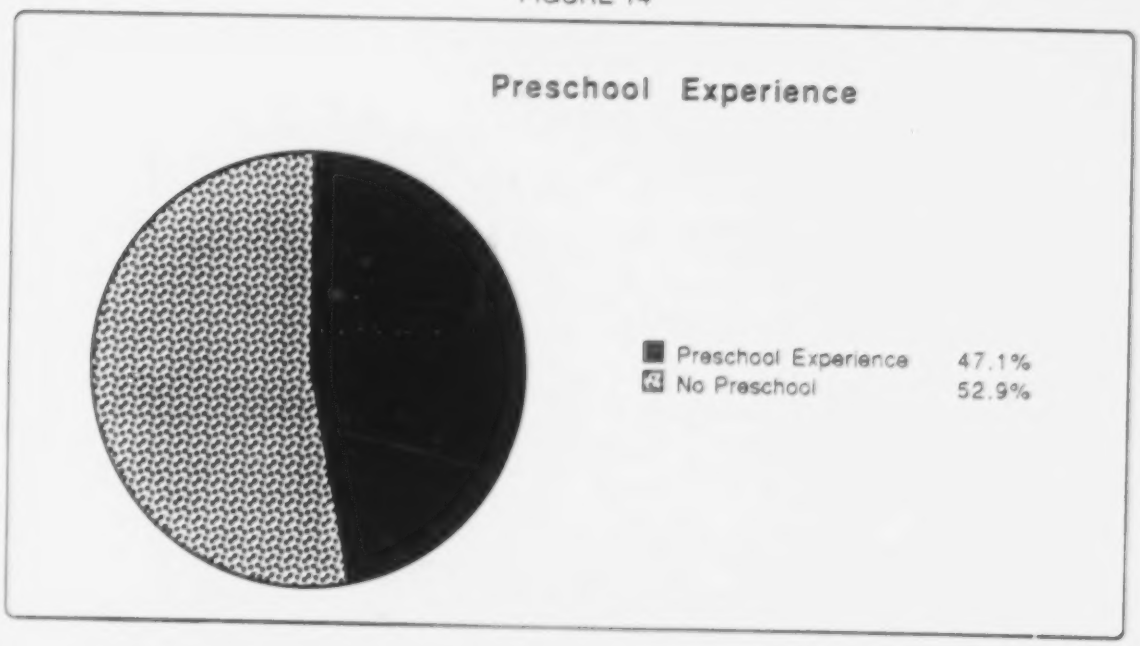


Table 13 illustrates that the degree of preschool experience is very nearly the same for that portion of the sample reported by longitudinal study schools. Nor do the percentages change significantly when looking only at children found to be at risk by longitudinal study schools.

TABLE 13
PRESCHOOL EXPERIENCE IN LONGITUDINAL SCHOOLS

Group	Preschool Experience	N	Percent
Total Longitudinal Study Schools	Yes	149	51.6
	No	140	48.4
At Risk Only-Longitudinal Study	Yes	83	52.8
	No	74	47.3

10. **Chronological Age at Pre-screening**

In the design of the program, the typical student is pre-screened as an entering kindergartener at age five. If identified as at risk, the child is post-screened as an exiting kindergartener and the information gained assists the first grade teacher in sequencing the instruction at the appropriate place in the Skills Checklist. For children identified as at risk, completion of the Skills Checklist is expected to take at least through grade one.

A few older children were screened as part of pre-test administration. Some of these students may be double repeaters of kindergarten or began kindergarten as six-year olds and were retained. A few schools screen both kindergarten and first graders when first entering the program, but do not need to screen first graders in subsequent years. A larger number of students will be seven years old when post-screened, nine to ten months later. These post-screening results provide diagnostic information to first grade teachers as at risk students move into first grade.

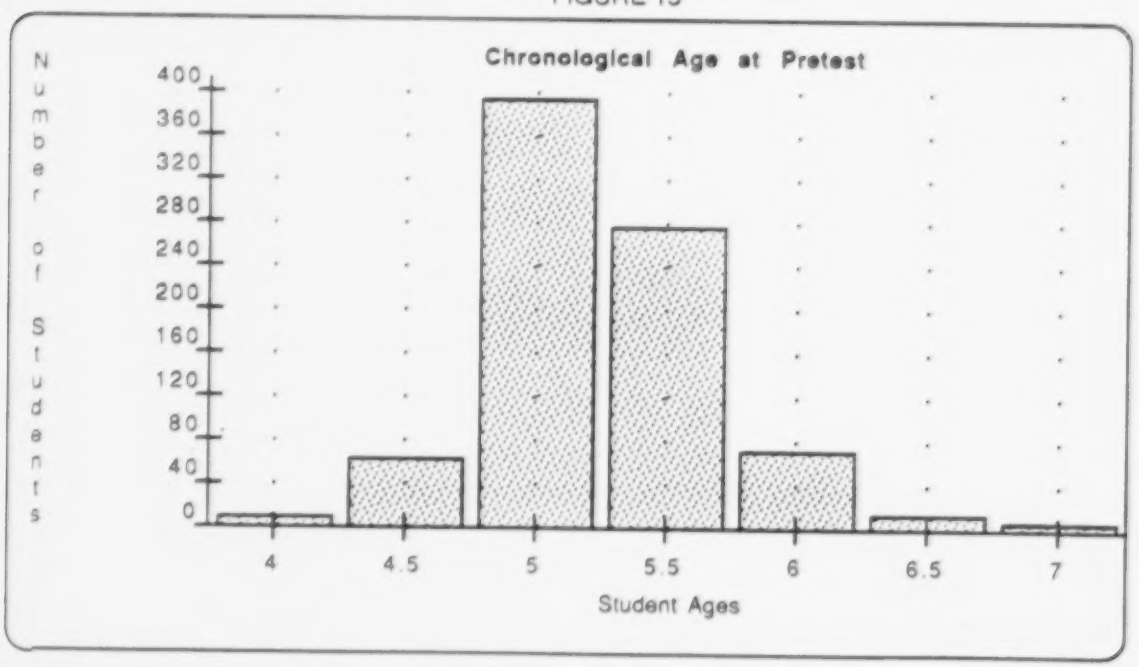
TABLE 14
CHRONOLOGICAL AGE AT PRE-SCREENING

CA	Frequency	Valid Percent	Cum Percent
4.08	2	.2	.2
4.17	1	.1	.4
4.25	1	.1	.5
4.33	2	.2	.7
4.67	3	.4	1.1
4.75	20	2.5	3.6
4.83	37	4.5	8.1
5.00	64	7.9	16.0
5.08	64	7.9	23.8
5.17	81	10.0	33.8
5.25	66	8.1	41.9

TABLE 14 continued

CA	Frequency	Valid Percent	Cum Percent
5.33	59	7.2	49.1
5.42	56	6.9	56.0
5.50	59	7.2	63.3
5.58	75	9.2	72.5
5.67	68	8.4	80.8
5.75	37	4.5	85.4
5.83	34	4.2	89.6
6.00	24	2.9	92.5
6.08	9	1.1	93.6
6.17	6	.7	94.3
6.25	12	1.5	95.8
6.33	8	1.0	96.8
6.42	10	1.2	98.0
6.50	5	.6	98.6
6.58	2	.2	98.9
6.67	3	.4	99.3
6.83	2	.2	99.5
7.00	2	.2	99.8
7.25	1	.1	99.9
7.42	1	.1	100.0

FIGURE 15



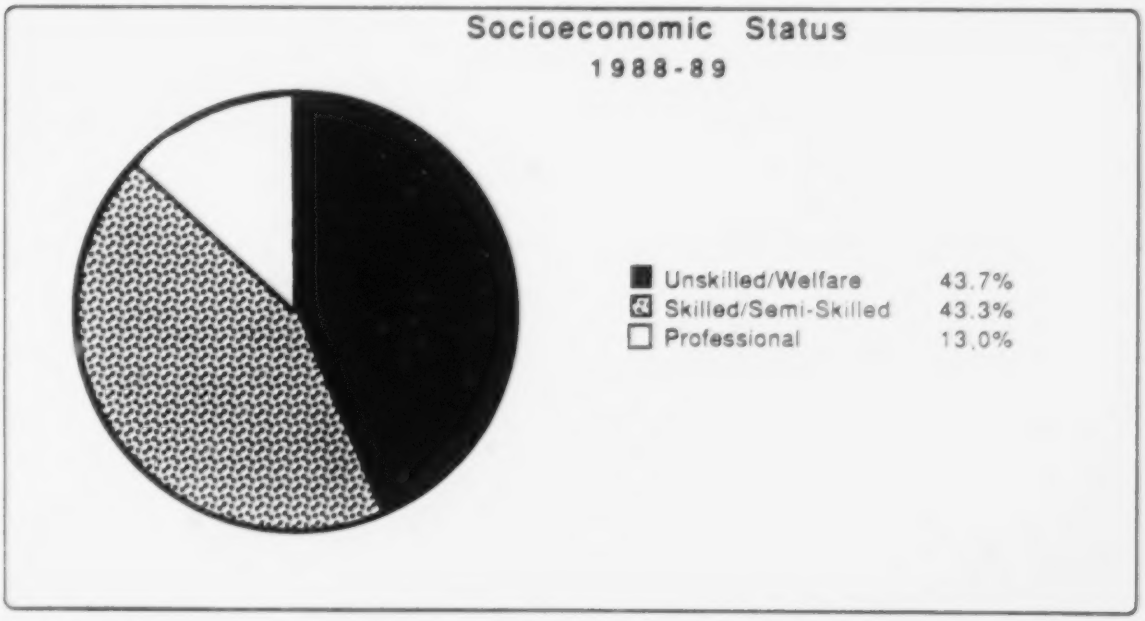
11. **Socioeconomic Status Index**

The socioeconomic status of each child screened is reported using the same index as the California Assessment Program. In the EISS sample, 43.7% of the families are unskilled, on welfare, or unknown. 43.7% percent are skilled or semi-skilled, and 13% semi-professional or professional. For the California school population, the percentages are 24%, 32%, and 30% respectively, indicating that EISS schools probably serve a higher proportion of disadvantaged children than do schools in general.

TABLE 15
1988-89 SOCIOECONOMIC STATUS

Socioeconomic Level	Frequency	Percent	Cum. Percent
Unskilled/Welfare/Unknown	403	43.7	43.8
Skilled/Semi-Skilled	399	43.3	87.0
Professional/Executives Semi-Professional	120	13.0	100.0

FIGURE 16



Summary

A representative sample of 922 students was analyzed to assess project impact. Major characteristics of the population were: 41.7% had a primary language other than English; 53.6% were male; 38.7% were first born; 12.9% were enrolled in child care; 31.8% were in Chapter I funded programs; 39.3% were identified as LEP; 58.8% had an ethnic background other than white-not of Hispanic origin; 46.4% had preschool experience; 43.7% were from families where the parent or parents were identified as unskilled; 43.3% from skilled/semi-skilled, and 13% were from families of professionals.

B. DEVELOPMENTAL HISTORIES

A questionnaire for parents is provided to each EISS school as an optional part of the screening process. Schools in the longitudinal studies are asked to use and report the results from the Parent Observation Form (POF). The following tables represent the results of the POF. (See Appendix for a copy of the form.) Since they come almost exclusively from schools in the longitudinal studies, this sample includes full classes, both those at risk and those not at risk.

TABLE 16
HEALTH CONCERNS

Health Concerns	Frequency	Percent	Cum. Percent
No Concerns Checked	206	62.8	62.8
1-2 Concerns	81	24.7	87.5
3-4 Concerns	28	8.5	96.0
5-6 Concerns	10	3.0	99.1
7-8 Concerns	3	.9	100.0

TABLE 17
HEARING ASSESSMENT

Hearing Assessment	Frequency	Percent	Cum. Percent
Hearing Examined - No Problem	231	70.6	73.7
Hearing Examined - Hearing Deficit	30	9.2	82.9
No Examination	56	17.1	100.0

TABLE 18
HEARING CONCERNS

Hearing Concern	Frequency	Percent	Cum. Percent
No Concerns Checked	243	74.5	74.5
1-3 Concerns	67	20.6	95.1
4 or More Concerns	16	4.9	100.0

TABLE 19
VISUAL ASSESSMENT

Visual Assessment	Frequency	Percent	Cum. Percent
Examined and Problem	43	12.8	12.8
Examined and No Problem	218	64.7	77.4
No Examination	75	22.3	99.7

TABLE 20
VISUAL CONCERNS

Visual Concerns	Frequency	Percent	Cum. Percent
No Concerns Checked	296	90.8	90.8
1-3 Concerns	26	8.0	98.8
4 or More Concerns	4	1.2	100.0

TABLE 21
MOTOR CONCERNS

Motor Concerns	Frequency	Percent	Cum. Percent
No Concerns Checked	258	80.6	80.6
1-3 Concerns	58	18.1	98.7
4 or More Concerns	4	1.2	99.9

Analysis

Results of the Parent Observation Form show that 37.1% of parents indicated one or more health concerns. Also, 17.1% of parents reported children had no hearing examination. Considering the deficits in receptive language noted on the Peabody Picture Vocabulary Test, this should be investigated. Are hearing examinations available in each school and are parents aware of these examinations? This is of special interest since 26% of parents reported concerns regarding their children's hearing while 9.2% reported visual concerns and 19.3% reported motor concerns.

C. RESULTS ON EISS DEVELOPED SCREENING INSTRUMENTS

The Language and Auditory Scale (LAS) and the Integrated Motor Activity Scale (MAS) were developed through the EISS Project. A description from the EISS Trainer Manual follows.

1. Description of Screening Instruments

Language and Auditory Scale (LAS), provides an estimate of a student's receptive and expressive language, auditory and visual skills. This screening tool is administered individually to each student. Small toys are used on many items as well as pictures to determine how well the child relates to concrete versus abstract stimuli. Results are recorded as developmental age ranges. This screening tool is available through the EISS office along with a Spanish version. It has also been translated into Vietnamese. Only staff trained by EISS certified trainers are qualified to administer this test. The LAS provides information reflective of the types of language typical of a primary grade classroom.

Integrated Motor Activity Scale (MAS), provides an estimate of a student's fine and gross motor skills, as well as observation of dominance. This screening tool is administered individually to evaluate such skills as dexterity, balancing, and eye-hand coordination. Results are recorded as developmental age ranges. This screening tool is available through the EISS office. Only staff trained by an EISS certified trainer are qualified to administer this test.

2. Results of Paired Sample t-test

Tables 22, 23, 24, and 25 and Figures 17 and 18 present the results of a paired sample t-test on pre/post raw scores for the LAS and MAS.

TABLE 22
PAIRED SAMPLES t-test - LANGUAGE AND AUDITORY SCALE

Group	Number of Cases	Std Mean	Mean Dev.	Diff.	t Value	Prob.
Total At-Risk						
Lang./Pre	503	56.3877	17.402			
Lang./Post	503	76.0080	13.380	-19.62	-34.28	.000
English Only						
Lang./Pre	226	66.3230	11.492			
Lang./Post	226	82.7434	10.890	-16.42	-23.30	.000
Spanish Speaking LEP						
Lang./Pre	217	51.4747	14.023			
Lang./Post	217	70.9862	11.662	-19.5115	-25.37	.000
Other LEP						
Lang./Pre	59	35.8305	21.264			
Lang./Post	59	68.4068	15.766	-32.5763	-14.54	.000

3. **Analysis by Primary Language**
   The two largest primary language subgroups were English Speaking (N=333) and Spanish Speaking (N=268). The other primary language groups made up less than 9% of the total sample and were considered too small for subgroup analysis.

   English and Spanish Speaking subgroup analysis will be provided for each of the major outcome measures (dependent variables).

4. **Developmental Age Range Scores**
   The EISS Manual states, "Make cautious use of developmental age range scores. These scores were developed using a regression analysis based on a sampling of students who took the items on the original test. These developmental age range scores should not be used to indicate the functioning level of students. The developmental age range scores are to be used as a statistic to determine at risk students and where to begin instruction. To determine precise developmental age requires several hours of testing by a credentialed psychologist or speech pathologist. EISS, through cautions in the test materials and program handbook, and through its training sessions, attempts to insure that screening results are used only for the purpose of planning instruction. Teachers are encouraged to report to parents in terms of skills mastered and those needing to be learned."

TABLE 23
DEVELOPMENTAL AGE RANGE SCORES - LANGUAGE AND AUDITORY SCALE

Sub-Test Group	Age Range Score Pre	Post	Gains
Verbal Expression			
Total At Risk	3 - 0	7 - 0	4 - 0
English Only	5 - 0	7 - 0	2 - 0
Spanish Speaking LEP	4 - 3	6 - 9	2 - 6
Other LEP Students	3 - 0	4 - 0	1 - 0
Receptive Language			
Total At Risk	3 - 6	6 - 0	2 - 6
English Only	3 - 0	7 - 0	4 - 0
Spanish Speaking LEP	3 - 0	5 - 6	2 - 6
Other LEP Students	3 - 0	5 - 3	2 - 3
Short-Term Visual Memory			
Total At Risk	5 - 3	7 - 0	1 - 10
English Only	5 - 3	7 - 0	1 - 10
Spanish Speaking LEP	4 - 9	7 - 0	2 - 3
Other LEP Students	5 - 3	7 - 0	1 - 10
Auditory Skills			
Total At Risk	4 - 3	5 - 9	1 - 6
English Only	5 - 0	6 - 9	1 - 9
Spanish Speaking LEP	4 - 3	6 - 6	2 - 3
Other LEP Students	3 - 0	5 - 3	2 - 3

FIGURE 17

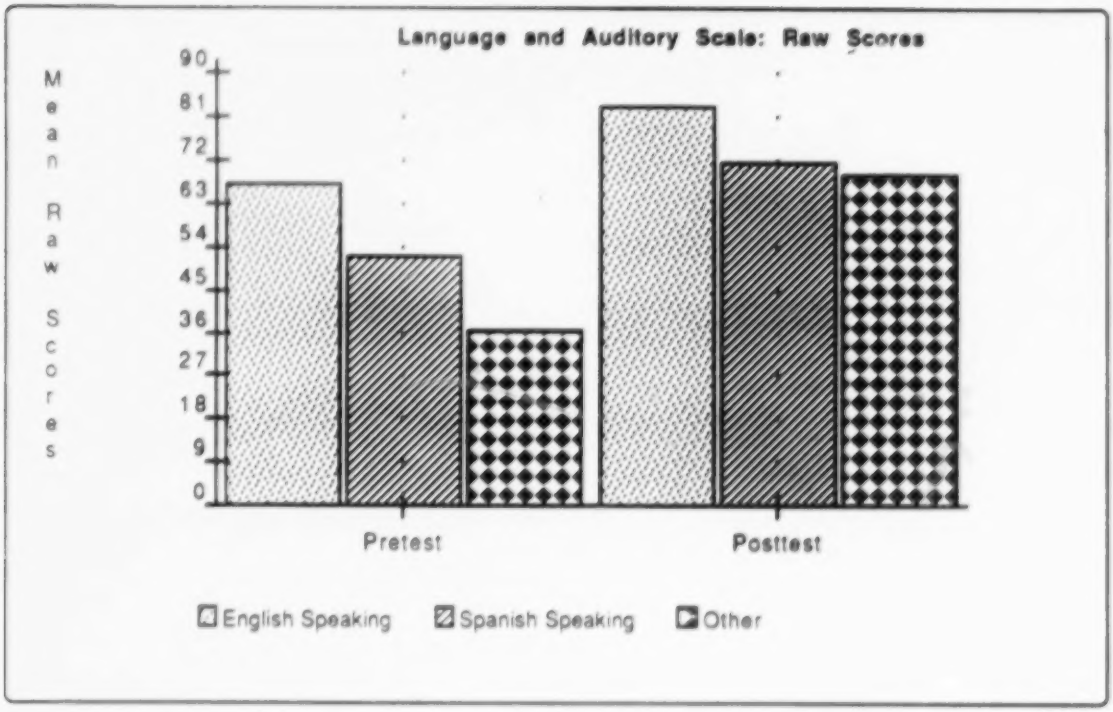


TABLE 24

PAIRED SAMPLES t-test - MOTOR ACTIVITY SCALE

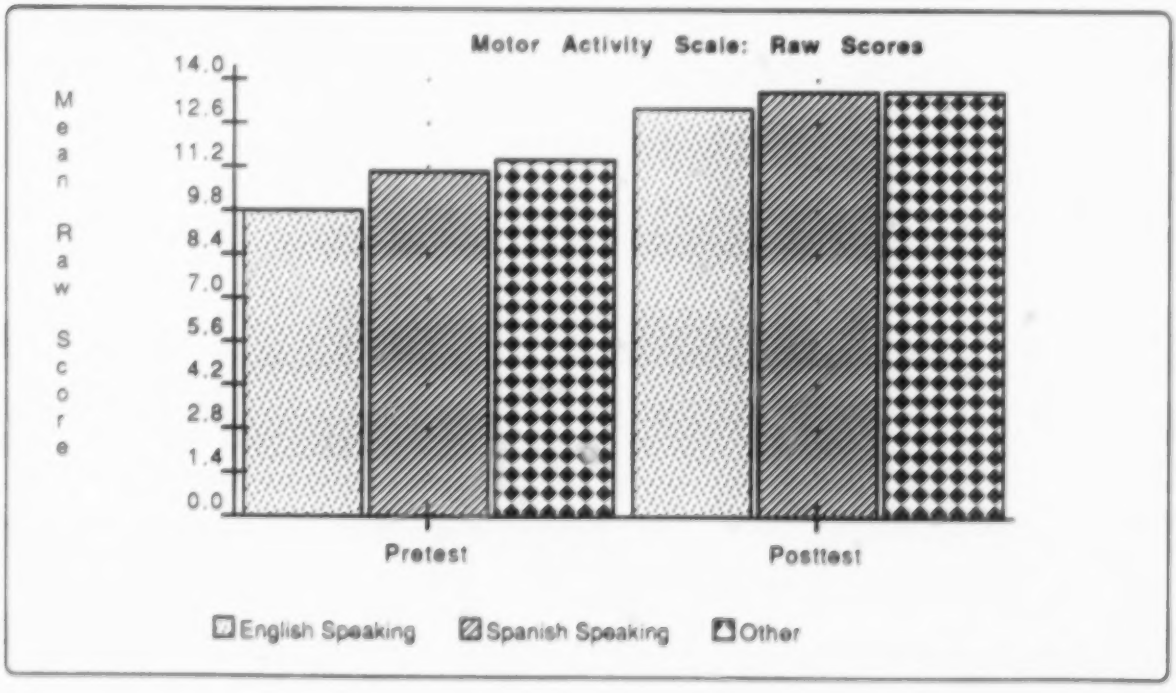
Group	Number of Cases	Mean	Std. Dev.	Mean Diff.	t Value	Probability
Total At Risk						
Motor/Pre	361	10.3767	3.012			
Motor/Post	361	13.2465	1.943	-2.86	-21.76	.000
English Speaking						
Motor/Pre	185	9.6973	3.051			
Motor/Post	185	12.9622	2.135	-3.26	-17.89	.000
Spanish Speaking						
Motor/Pre	128	10.9922	2.652			
Motor/Post	128	13.5313	1.582	-2.53	-12.38	.000
Other LEP Students						
Motor/Pre	47	11.3617	3.233			
Motor/Post	47	13.5532	1.920	-2.19	-5.25	.000

TABLE 25

DEVELOPMENTAL AGE RANGE SCORES - MOTOR ACTIVITY SCALE

Sub-Test/Group	Age Range Score Pre	Post	Gains
Fine Motor			
Total At Risk	6 - 6	7 - 0	0 - 6
English Only	6 - 6	7 - 0	0 - 6
Spanish Speaking LEP	6 - 6	7 - 0	0 - 6
Other LEP Students	6 - 6	7 - 0	0 - 6
Gross Motor			
Total At Risk	5 - 6	7 - 0	1 - 6
English Only	5 - 6	6 - 9	1 - 3
Spanish Speaking LEP	6 - 0	7 - 0	1 - 0
Other LEP Students	6 - 0	7 - 0	1 - 0

FIGURE 18



5. **Analysis of Results with EISS Screening Instruments**
The results of the LAS and MAS indicate statistically significant gains made by the at risk students. Both the English speaking and Spanish speaking students showed these gains.

The analysis of the LAS by subtest showed excellent gains from pre to post assessments. The English speaking and Spanish speaking and "other" LEP subgroups showed an average gain of over two years growth using the developmental age range scores. This two year growth was based on seven months instruction. The receptive language subtest showed the largest gains in developmental age range scores.

On the MAS, the pre/post gains as measured by the developmental age range scores were small except for the at risk English speaking students on the Gross Motor subtest. These students showed a gain of 12-18 months. The other students scored above average at pre-test time.

D. MASTERY OF THE EISS SKILLS CHECKLIST

1. Paired Sample t-test

The parent EPSF (Early Prevention of School Failure) Project developed a skills checklist of 52 developmental pre-academic skills. Teachers assessed which of these skills students had mastered at the time of pre-screening (Fall) and post-screening (Spring). Table 26 and Figure 19 present of the results of those assessments.

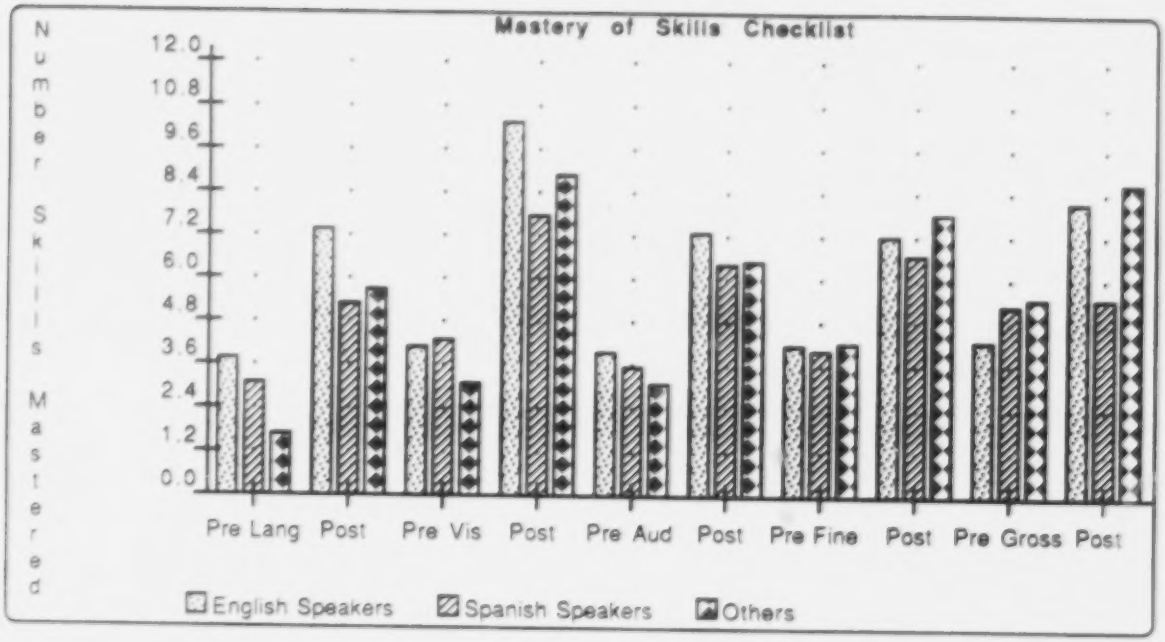
TABLE 26

SKILLS CHECKLIST
PRE/POST ASSESSMENT OF MASTERY - PAIRED SAMPLE t-test

Group	Number of Cases	Mean	Std Dev	Mean Diff.	t Value	Prob.
Total At Risk						
Pre Gross Motor	165	4.8848	2.574			
Post Gross Motor	165	1.152	1.152	-3.20	-17.19	.000
English Speaking						
Pre Gross Motor	59	4.1864	2.751			
Post Gross Motor	59	8.0508	.918	-3.86	-11.15	.000
Spanish Speaking						
Pre Gross Motor	73	5.2192	2.077			
Post Gross Motor	73	7.8904	1.400	-2.67	-12.45	.000
Other LEP						
Pre Gross Motor	33	5.3939	3.020			
Post Gross Motor	33	8.6061	.704	-3.21	-6.72	.000
Total At Risk						
Pre Fine Motor	176	4.0170	2.129			
Post Fine Motor	176	7.0057	1.987	-2.98	-16.79	.000
English Speaking						
Pre Fine Motor	62	4.0484	2.499			
Post Fine Motor	62	7.1613	2.159	-3.11	-10.60	.000
Spanish Speaking						
Pre Fine Motor	81	3.9506	1.746			
Post Fine Motor	81	6.5802	1.955	-2.62	-9.40	.000
Other LEP						
Pre Fine Motor	33	4.1212	2.288			
Post Fine Motor	33	7.7576	1.437	-3.63	-10.90	.000

Group	Number of Cases	Mean	Std. Dev.	Mean Diff.	t Value	Prob.
Total At Risk						
Pre Auditory	168	3.5119	2.200			
Post Auditory	168	6.6726	2.923	-3.16	-14.48	.000
English Speaking						
Pre Auditory	61	3.8361	2.647			
Post Auditory	61	7.1967	3.203	-3.36	-7.67	.000
Spanish Speaking						
Pre Auditory	74	3.4595	1.792			
Post Auditory	74	6.3514	2.550	-2.89	-11.79	.000
Other LEP						
Pre Auditory	33	3.0303	2.084			
Post Auditory	33	6.4242	3.113	-3.39	-6.37	.000
Total At Risk						
Pre Language	168	3.000	2.033			
Post Language	168	6.0476	2.248	-3.04	-19.30	.000
English Speaking						
Pre Language	63	3.6984	2.276			
Post Language	63	7.2857	1.641	-3.58	-12.51	.000
Spanish Speaking						
Pre Language	74	2.9865	1.659			
Post Language	74	5.1892	1.991	-2.20	-13.05	.000
Other LEP						
Pre Language	31	1.6129	1.606			
Post Language	31	5.5806	2.766	-3.96	-10.74	.000
Total At Risk						
Pre Visual	171	3.8947	2.632			
Post Visual	171	8.8012	3.652	-4.90	-19.32	.000
English Speaking						
Pre Visual	61	4.000	2.319			
Post Visual	61	10.2459	3.931	-6.24	-14.50	.000
Spanish Speaking						
Pre Visual	78	4.1923	2.319			
Post Visual	78	7.6795	2.894	-3.48	-11.32	.000
Other LEP						
Pre Visual	32	2.9688	1.992			
Post Visual	32	8.7813	3.892	-5.81	-10.03	.000

FIGURE 19



2. **Analysis of Results with Skills Checklist**
All areas (Gross Motor, Fine Motor, Auditory, Language and Visual) showed statistically significant increases on pre/post assessment. These gains support the gains reported on the LAS and MAS. The English speaking subgroup showed the largest gains in visual memory and auditory skills. The Spanish speaking and "other" at risk students showed a similar pattern.

E. RESULTS ON NATIONALLY STANDARDIZED INSTRUMENTS

1. **Peabody Picture Vocabulary Test (PPVT): Receptive Language**
This is a standardized norm-referenced test of receptive vocabulary published by American Guidance Services, Inc. Students are requested to respond to a word by pointing to one of four pictures. This test has excellent reliability and validity data.

   a. The EISS Trainer's Manual describes the PPVT as follows:
   The Peabody Picture Vocabulary Test provides an estimate of a student's receptive vocabulary. The test is administered individually to each student. Four different pictures of familiar objects are presented; the examiner names one and the child points to the picture named. Results are recorded as an age equivalent score. The PPVT is a standardized, normed test which has other evaluative applications beyond EISS. There are two forms: use Form L for pre-test and Form M for post-test. It is recommended that a speech and language specialist or other qualified professional with specific PPVT training administer the test in accordance with the test manual.

   b. Paired Sample t-test Results
   The results of the paired sample t-test on PPVT raw scores are presented in Table 27 and figures 20 and 21. The conversion of these mean raw scores to percentile ranks and age equivalents are presented in Table 28 and Figure 22 and 23. Figure 24 illustrates student gains compared to months of instruction.

TABLE 27

PEABODY PICTURE VOCABULARY TEST
PAIRED SAMPLE t-test

Group	Number of Cases	Mean	Std Dev	Mean Diff.	t Value	Probability
Total At Risk						
Pre PPVT	554	34.2004	19.437			
Post PPVT	554	50.3538	19.482	-16.15	-36.63	.000
English Speaking						
Pre PPVT	263	47.8023	15.579			
Post PPVT	263	64.3650	15.088	-16.56	-27.66	.000
Spanish Speaking						
Pre PPVT	234	22.6752	12.625			
Post PPVT	234	36.9359	12.541	-14.26	-21.17	.000
Other LEP						
Pre PPVT	55	17.5091	15.088			
Post PPVT	55	39.9455	15.759	-22.43	-14.58	.000

FIGURE 20

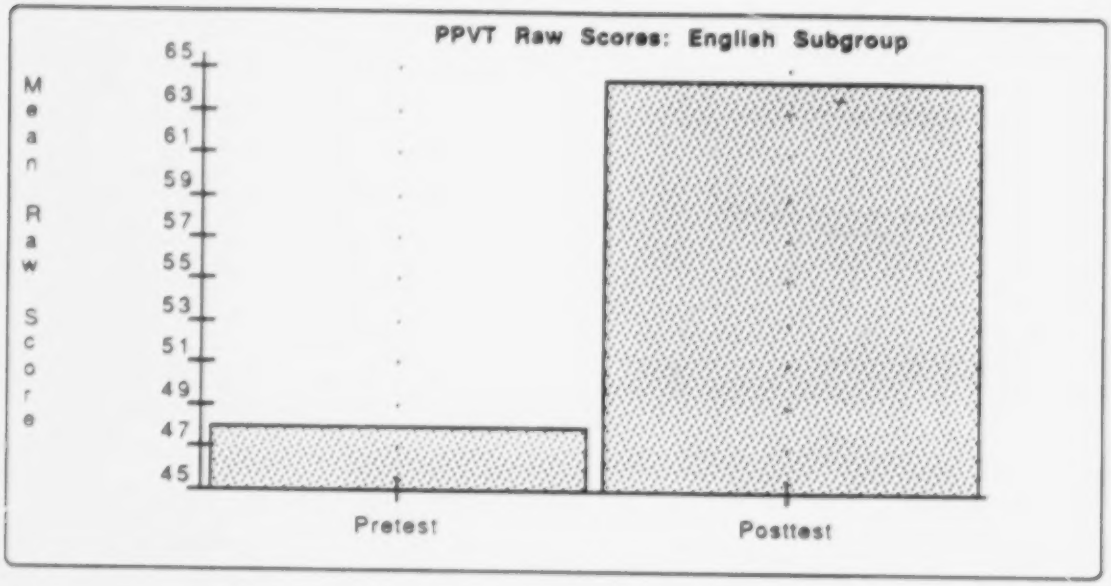


FIGURE 21

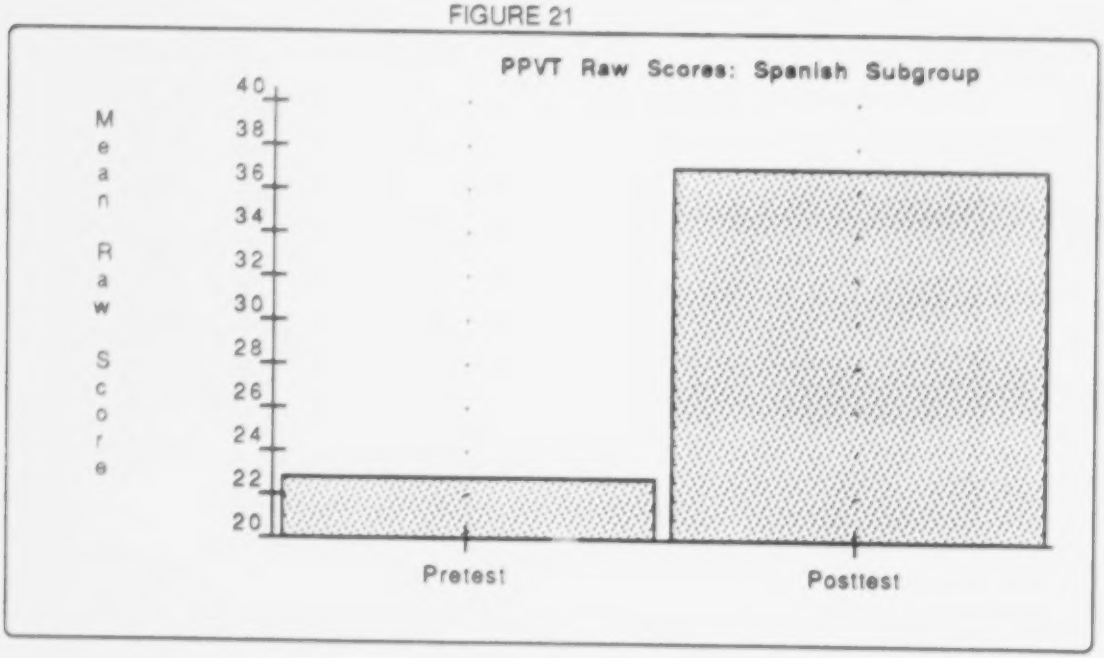


TABLE 28

PEABODY PICTURE VOCABULARY TEST
MEAN RAW SCORE CONVERSIONS

Pre/Post	Age Equivalent	Percentile Rank
English Speaking		
PPVT Pre Test	4 - 3	16
PPVT Post Test	5 - 6	42
Spanish Speaking		
PPVT Pre Test	4 - 1	10
PPVT Post Test	5 - 5	27

FIGURE 22

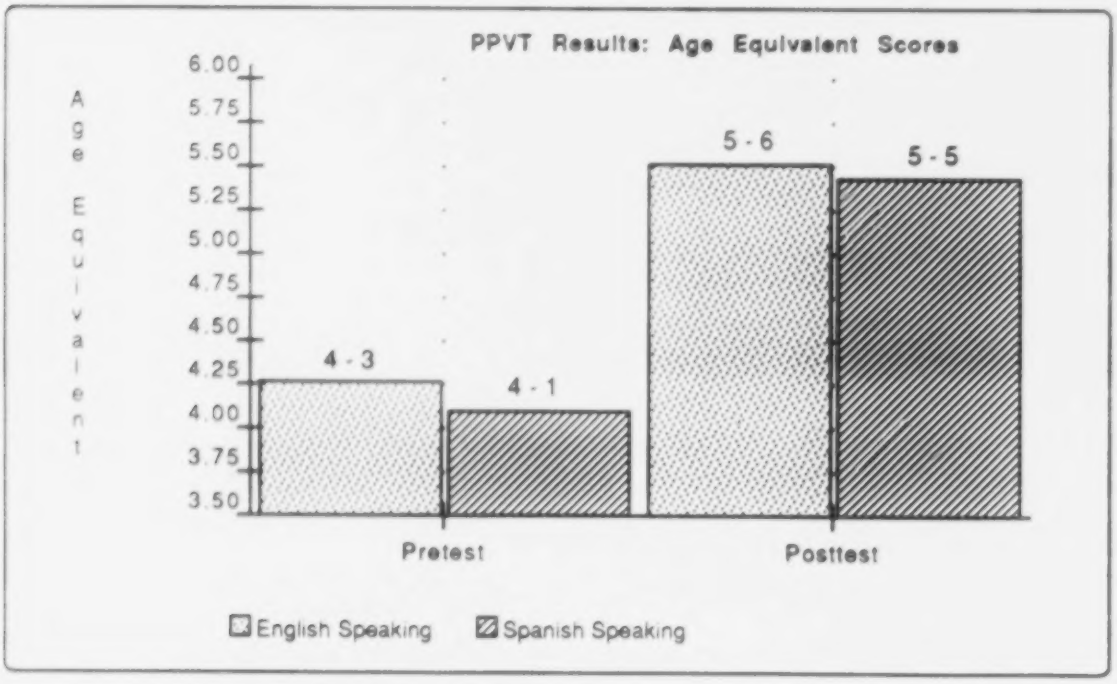


FIGURE 23

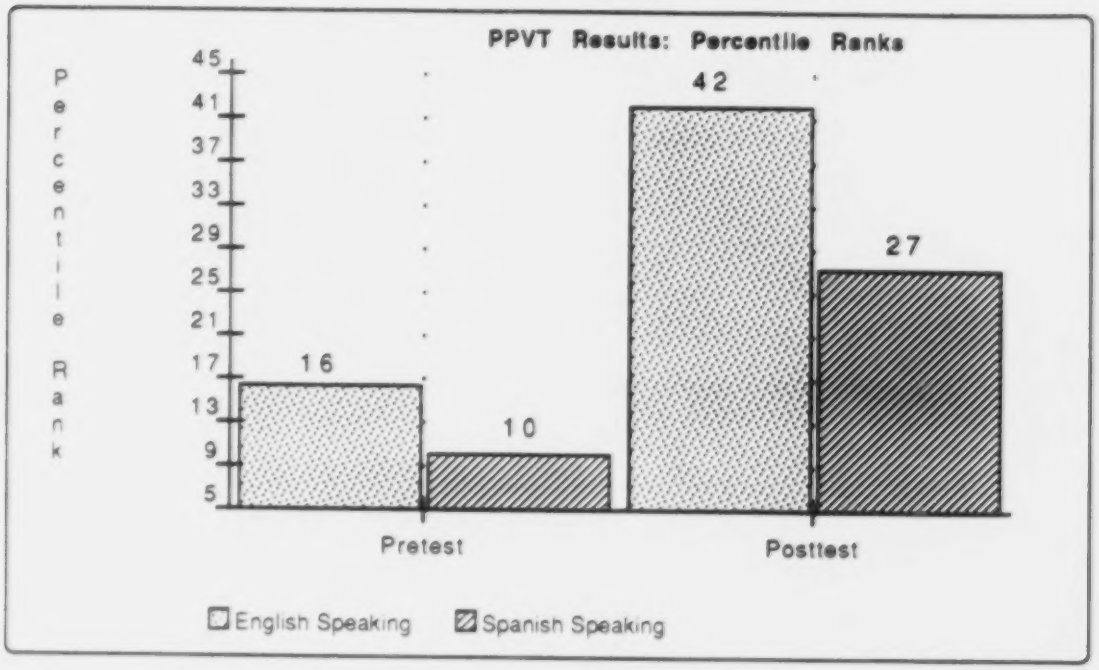
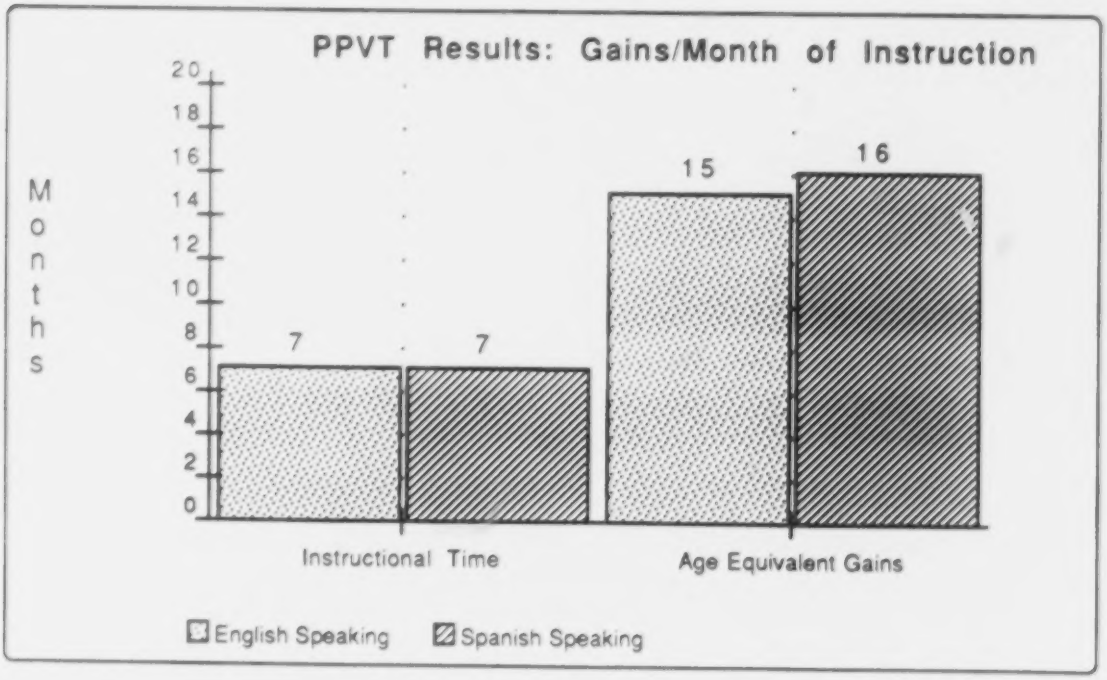


FIGURE 24



c. Analysis

There was a statistically significant pre/post increase in raw scores for at risk students. The increase in percentile ranks for both the English and Spanish speaking at risk students reflect an educationally significant reduction in the gap between the standardization norms and the at risk students participating in the EISS program.

English speaking students showed a 15 month gain pre/post for an average seven months of instruction, and Spanish speaking LEP students showed 16 months of gain for seven months of instruction. The results indicate an educationally and statistically significant improvement in receptive language as measured by the PPVT.

2. **Developmental Test of Visual Motor Integration (VMI)**
The VMI consists of 24 geometric forms that are to be copied in a test booklet. These geometric forms are arranged in order of increasing difficulty, and an individual's score is calculated based on the number of forms successfuly copied. Educational assessment is the stated purpose for which the test has been designed.

   a. The EISS Trainer's Manual describes the VMI as follows:
   "The Developmental Test of Visual Motor Integration provides an estimate of visual/motor abilities predicting readiness for writing and reading. Each student copies scaled drawings of increasing difficulty. A raw score of eight or less generally indicates a child is not ready for pencil and paper activities. The VMI is a standardized, normed test which has other evaluative applications beyond screening. Results are recorded as a developmental age equivalent. A trained professional with VMI experience should administer this test in accordance with the test manual. Information from the VMI compliments and builds upon information obtained by the Motor Activity Scale and Draw-A-Man tests." The results of the VMI are presented in Tables 29 and 30 and in Figures 25, 26, 27, and 28.

TABLE 29

DEVELOPMENTAL TEST OF VISUAL MOTOR INTEGRATION-VMI
PAIRED SAMPLE t-test

Pre/Post	Number of Cases	Mean	Std Dev	Mean Diff.	t Value	Probability
Total At Risk						
Pre VMI	546	7.1429	2.542			
Post VMI	546	10.2161	2.295	-3.0733	-30.59	.000
English Speaking						
Pre VMI	256	6.7500	2.494			
Post VMI	256	10.1016	2.514	-3.3516	-22.77	.000
Spanish Speaking						
Pre VMI	226	7.3850	2.411			
Post VMI	226	10.0575	1.976	-2.6726	-17.65	.000
Other LEP						
Pre VMI	62	7.7742	2.911			
Post VMI	62	11.0645	1.915	-3.2903	-10.90	.000

TABLE 30

DEVELOPMENTAL TEST OF VISUAL MOTOR INTEGRATION-VMI
MEAN RAW SCORE CONVERSION

Pre/Post	Age Equivalent	Percentile Ranks
Total At Risk		
Pre Test VMI	4 - 9	18
Post Test VMI	5 - 7	44
English Speaking		
Pre Test VMI	4 - 9	18
Post Test VMI	5 - 7	44
Spanish Speaking		
Pre Test VMI	4 - 9	18
Post Test VMI	5 - 7	44
Other LEP		
Pre Test VMI	5 - 1	33
Post Test VMI	5 - 10	65

FIGURE 25

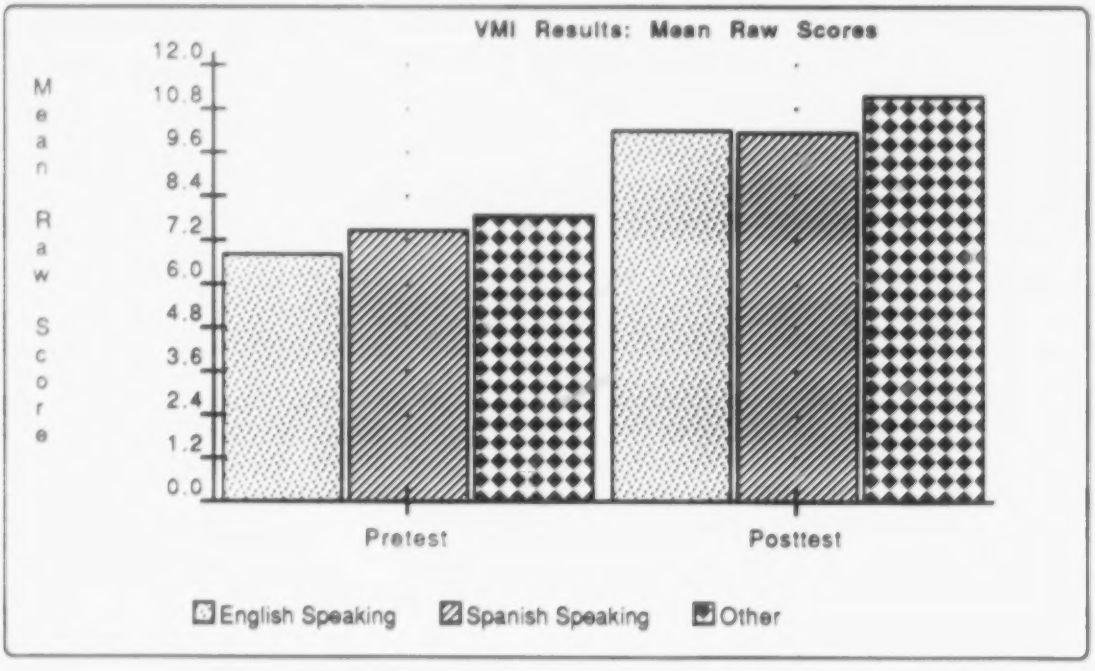


FIGURE 26

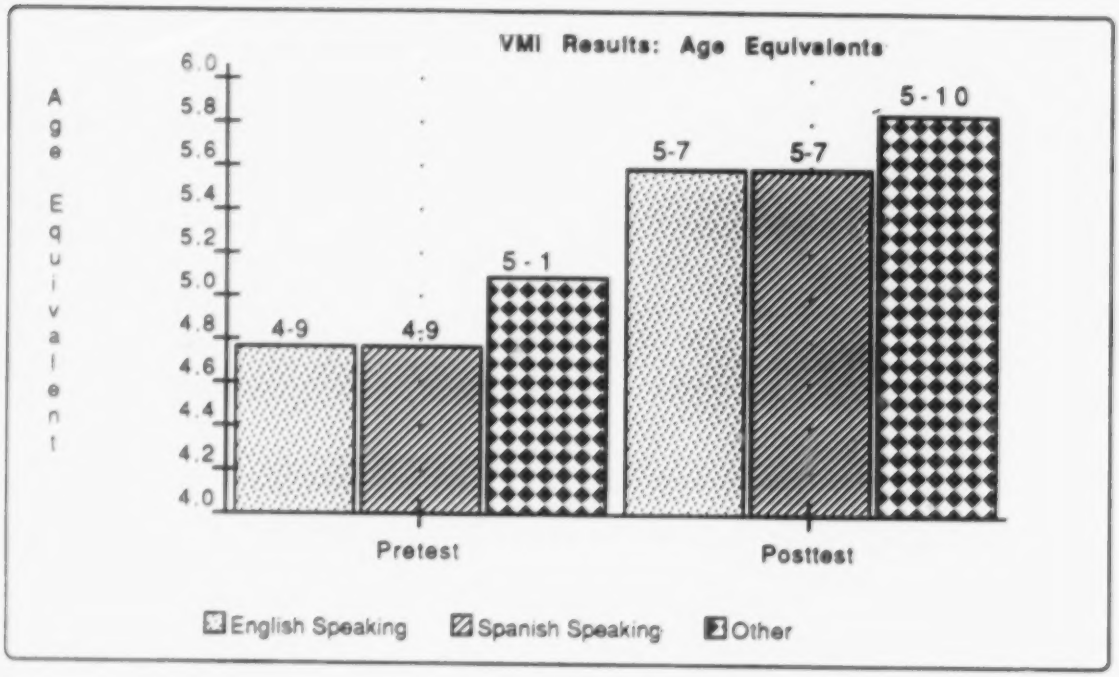


FIGURE 27

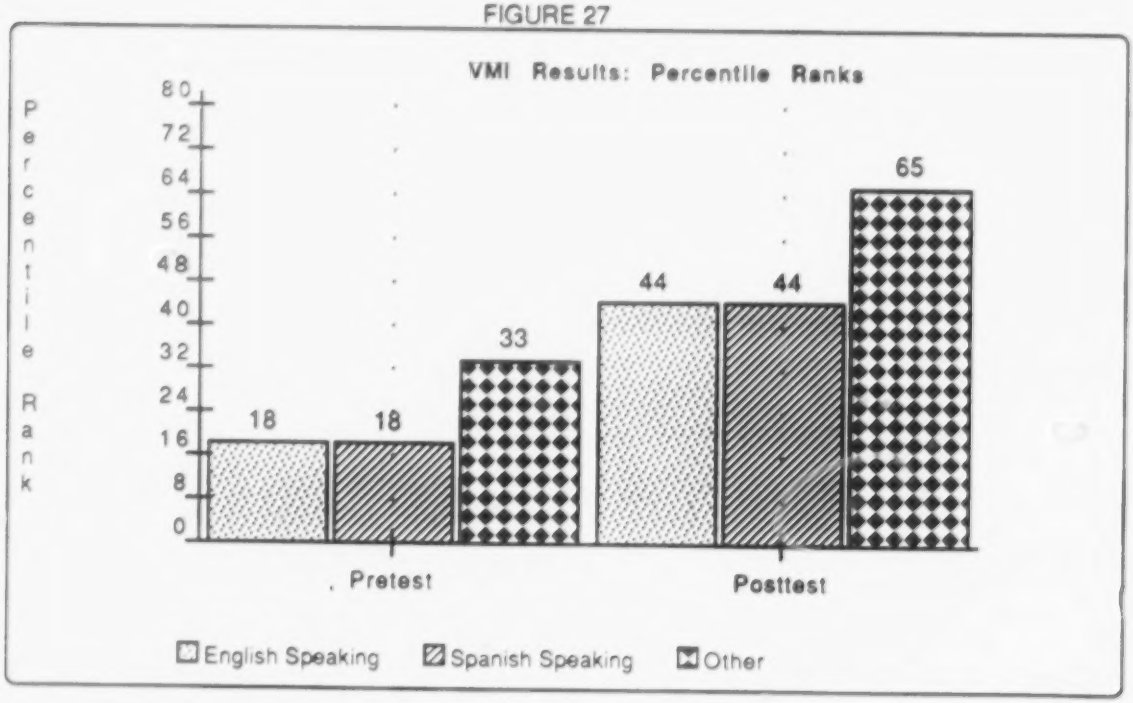
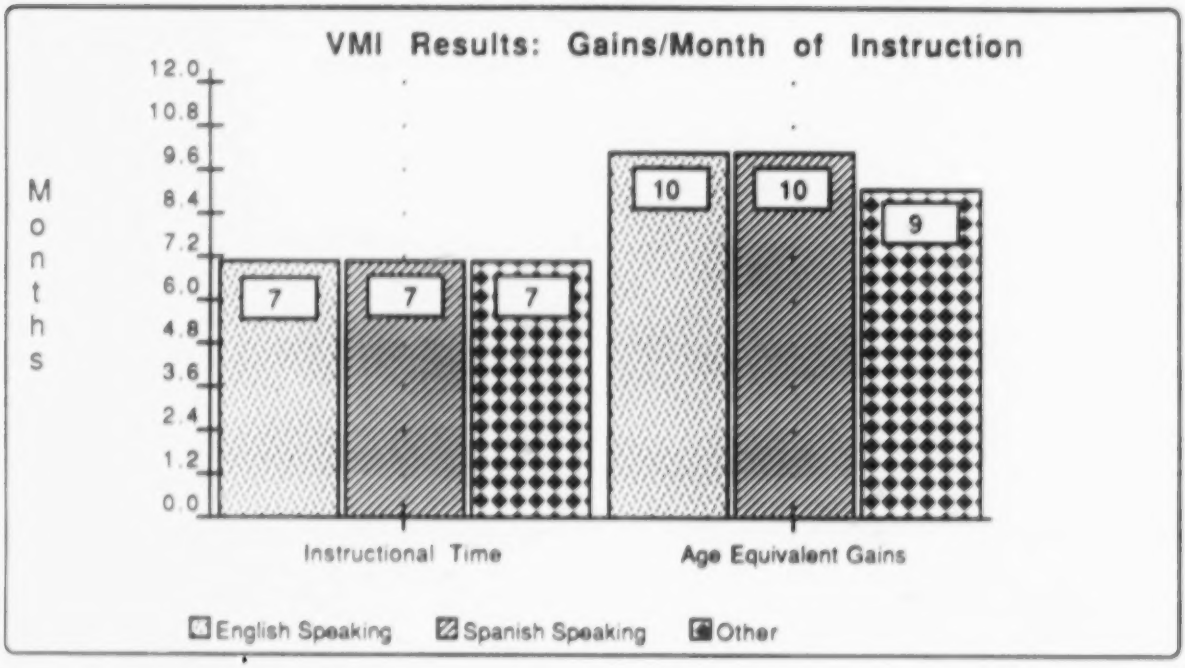


FIGURE 28



b. Analysis

For the English speaking at risk students, there was a ten month increase in age equivalent scores based on seven months of instruction. The results show an increase in percentile ranks from 18-24 and represent an educationally significant reduction in the "gap" between participating students and the normative sample.

For the Spanish speaking at risk students, there was a ten month increase for seven months of instruction. As can be seen in percentile rank pre-post scores, the "other" LEP group showed a nine month increase for seven months of instruction.

Although the domain of visual/motor integration assessed by the VMI showed an area of need for the English speaking at risk students, the deficit was not as great as the receptive language area assessed by the PPVT and LAS.

3. Draw-A-Man Test (D-A-M)

a. The EISS Trainer's Manual describes the Draw-A-Man as follows:

"The Draw-A-Man provides additional information on visual motor abilities. It has a stronger memory factor than the VMI. The Goodenough scoring scale provides a developmental age equivalent score for the child's drawing of a man. The D-A-M is a standardized, normed test. Both the D-A-M and VMI can be administered in a small group (3-4) but individual administration is recommended." The results of the paired sample t-test are presented in Table 31 and Figure 29 while conversion mental age scores (MA) are presented in Figure 30.

TABLE 31
DRAW-A-MAN (D-A-M) PAIRED SAMPLE t-test

Group	Number of Cases	Mean	Std Dev	Mean Diff.	t Value	Prob.	MA
Total At Risk							
Pre Test DAM	391	10.9361	10.151				5-9
Post Test DAM	391	16.9719	12.219	-6.0358	-17.74	.000	7-3
English Speaking							
Pre Test DAM	208	8.5385	3.735				5-3
Post Test DAM	208	13.7548	6.119	-5.2163	-12.48	.000	6-6
Spanish Speaking							
Pre Test DAM	134	15.3209	15.479				6-9
Post TEst DAM	134	21.8582	18.053	-6.5373	-9.52	.000	8-6
Other LEP							
Pre Test DAM	47	8.9787	5.659				5-3
Post Test DAM	47	17.0426	6.065	-8.0638	-10.49	.000	7-3

FIGURE 29

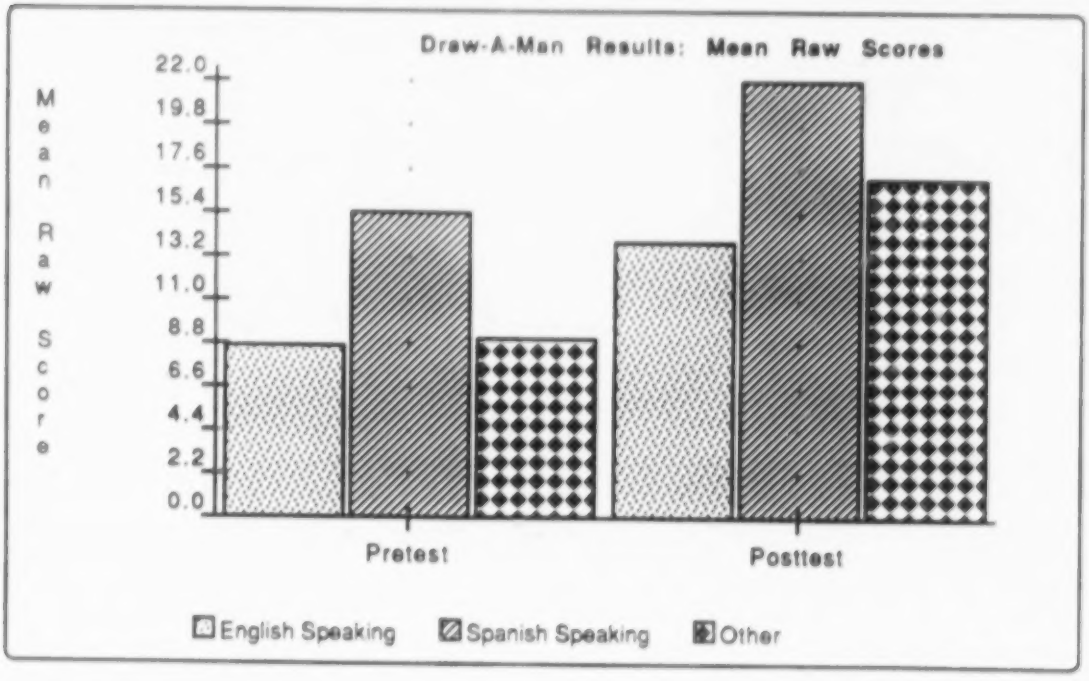
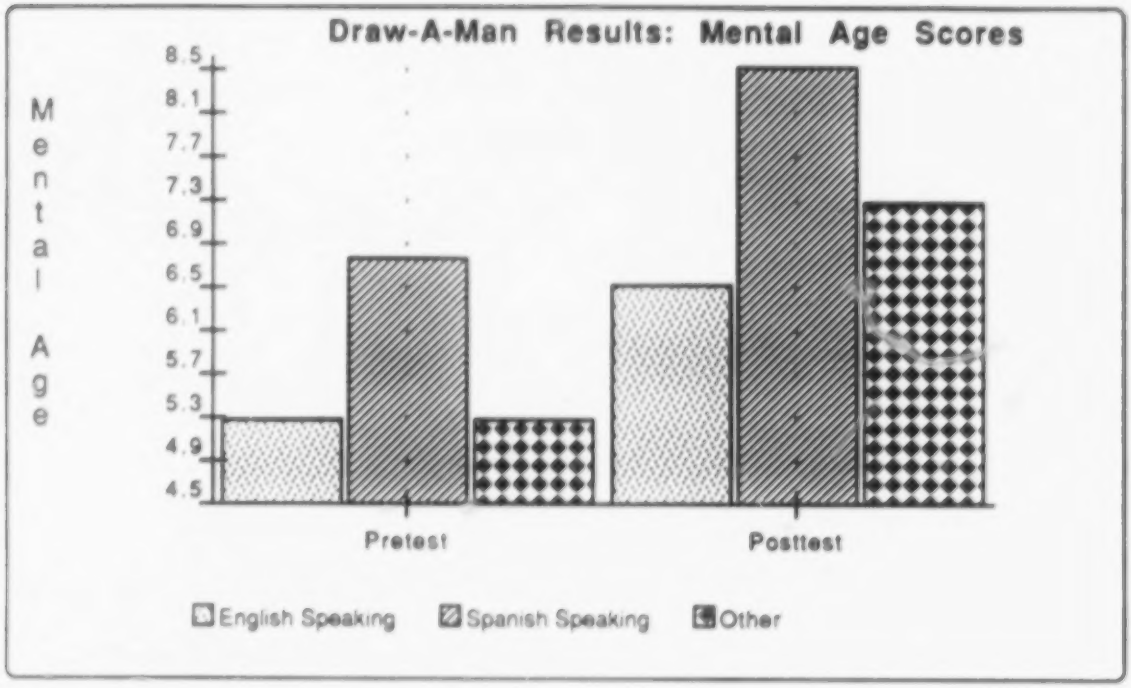


FIGURE 30



b. Analysis

The results for English speaking students indicate a statistically significant increase in performance on the D-A-M over the course of the year. Students showed an increase of 30 months in MA scores while receiving sevenmonths of instruction. Spanish speaking at risk students showed an increase of 33 months in MA scores while receiving seven months of instruction. The "other" LEP group showed an increase of 24 months in MA scores while receiving seven months of instruction.

4. **Tests of Basic Experience (TOBE): Academic Readiness**

a. The TOBE is a complete set of group tests of the "richness of conceptual background" of children in preschool, kindergarten, or first grade. Each of the two levels has four separate tests - mathematics, language arts, science, and social studies - and one composite test of general concepts which includes items from the other four. Each test contains 28 items, and requires approximately 25 minutes to administer. Test items have been selected on a combination of norm-referenced criteria. Items were selected to achieve a balance which avoided very easy and very difficult items (norm-referenced) but some items which appeared to be relatively easy or relatively difficult were retained due to the desirability of a measure of the concept inherent in the items (criterion-referenced). In each item, the examiner gives a verbal direction and the child marks one out of four pictures in his/her test booklet. The Spanish version of the test was administered to Spanish speaking students.

b. The results of Level K of the TOBE Language and Math are presented in Table 32 and Figures 31, 32, and 33.

TABLE 32

TEST OF BASIC EXPERIENCE (TOBE) RESULTS
PAIRED SAMPLE t-test

Pre/Post	Number of Cases	Mean	Std Dev	Mean Diff.	t Value	Prob.	PR
Total At Risk							
Pre Language	193	12.3938	4.563				19
Post Language	193	16.0415	5.124	-3.6477	-12.20	000	27
English Speaking							
Pre Language	75	15.2667	4.375				37
Post Language	75	19.5733	4.195	-4.3067	-11.14	000	53
Spanish Speaking							
Pre Language	86	10.7093	3.412				11
Post Language	86	13.3140	3.764	-2.6047	-5.51	000	13
Other LEP							
Pre Language	32	10.1875	4.299				11
Post Language	32	15.0938	5.479	-4.9063	-5.98	000	22
Total At Risk							
Pre Math	187	10.8984	4.895				20
Post Math	187	15.2460	5.108	-4.3476	-13.30	000	32
English Speaking							
Pre Math	78	13.3846	5.041				36
Post Math	78	18.0000	5.129	-4.6154	-9.10	000	44
Spanish Speaking							
Pre Math	79	8.9620	3.510				15
Post Math	79	12.5443	3.792	-3.5823	-7.87	000	22
Other LEP							
Pre Math	30	9.5333	4.932				20
Post Math	30	15.2000	4.302	-5.6667	-5.94	000	32

FIGURE 31

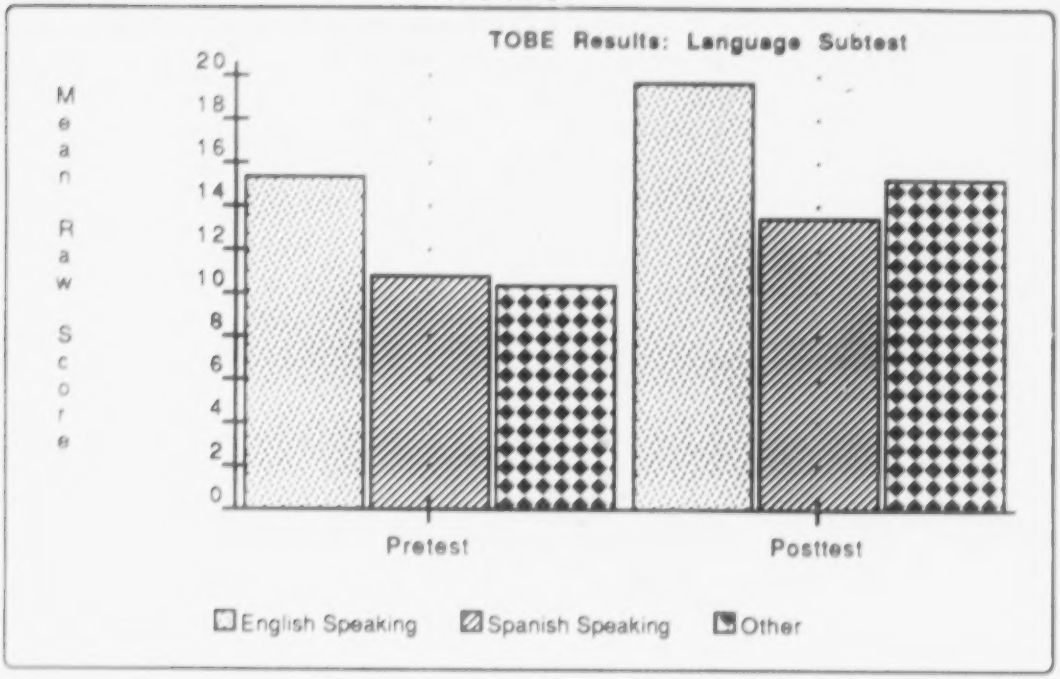


FIGURE 32

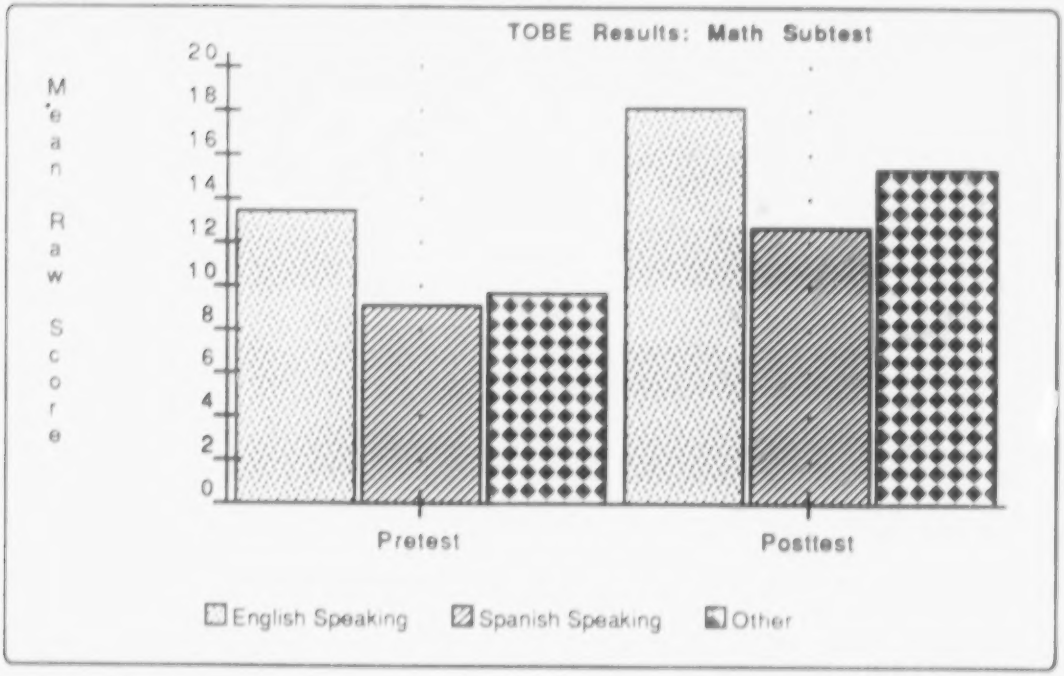
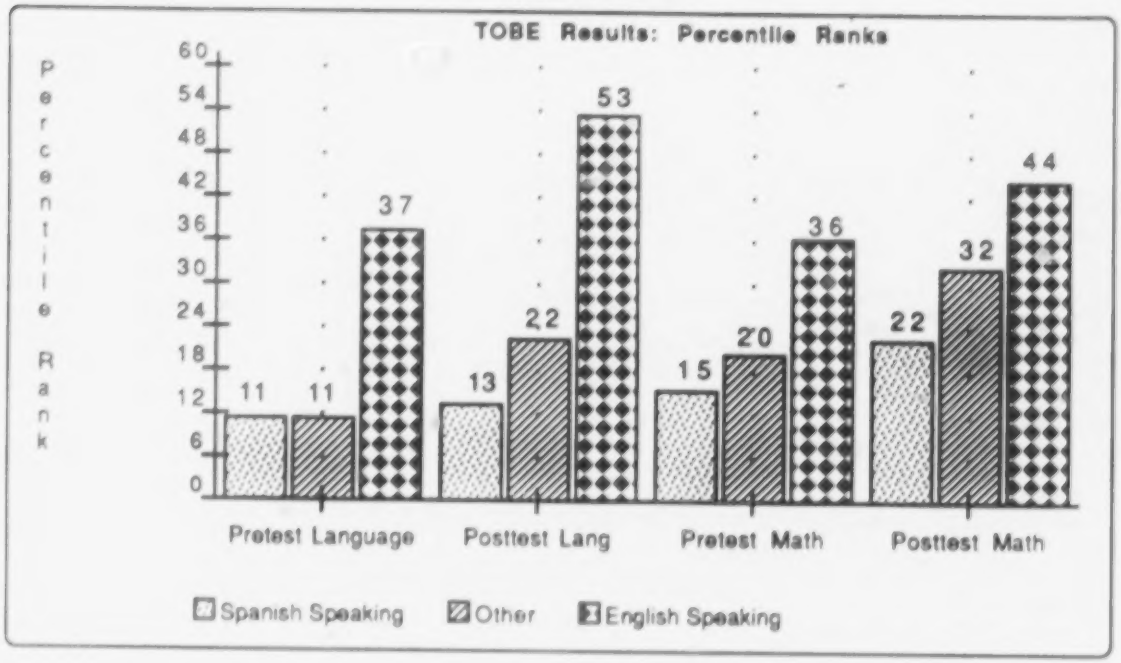


FIGURE 33



c. Analysis

At risk students showed educationally and statistically significant pre/post gains on the TOBE. Both the English speaking and Spanish speaking at risk students showed considerable increases in percentile rank scores pre/post. On the Language subtest, English speaking at risk students gained 16 percentile ranks, and Spanish speaking at risk students gained 2 percentile ranks. The "other" LEP group gained 11 percentile ranks. On the Math subtest, English speaking at risk students showed a gain of 8 percentile rank gains pre/post, the Spanish speaking at risk students showed a 7 percentile rank increase. The "other" LEP group gained 12 percentile ranks.

F. INTERACTION OF VARIABLES AND OUTCOME MEASURES

1. Analysis of Variance

A statistical analysis of a variety of program components and student background factors was conducted. The purpose is to determine which factors seem to have the most impact on student gains. In technical terms, multiple analysis of variance analyses were performed to determine the interaction of independent variables (i.e. Primary Language, Chapter I, etc.) and outcome measures post-test (LAS, MAS, DAM, PPVT, VMI, TOBE). Each outcome measure post-test was identified as the dependent variable with the pre-test measure as a covariate. Table 33, following, presents the results of this analysis. Thirteen selected variables are illustrated in Figure 34.

TABLE 33

ANALYSIS OF VARIANCE
POST TEST AS DEPENDENT
PRE TEST AS COVARIATE
F-VALUES

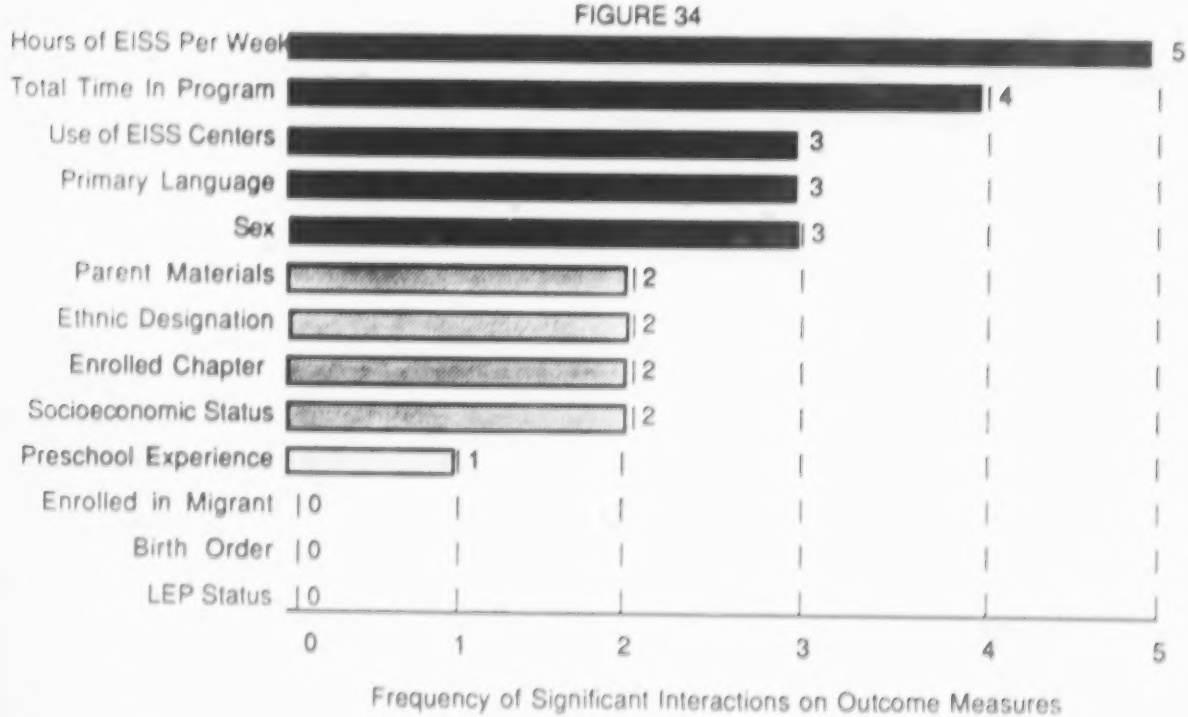
Outcome Measure - Post Test

Variable	PPVT	LAS	MAS	DAM	VMI	TOBE LANG.	TOBE MATH
Sex	11.429[3]	4.036[1]	4.287[1]	1.986	2.423	.026	.000
Socioeconomic Status	1.895	4.969[2]	.806	.954	5.673[2]	1.667	1.352
Primary Language	N/A	10.860[3]	.396	2.144	5.725[2]	13.869	9.529
Migrant Program	.012	1.730	.688	.545	.579	2.292	.006
Birth Order	1.095	.628	.372	.417	.559	.247	1.495
Child Care	5.694[1]	2.418	.069	.776	10.263[3]	1.927	.569
Chapter I	5.588[1]	1.919	.113	3.593	.734	4.07611	.011[3]
LEP Status	N/A	2.089	1.435	1.012	.001	.618	.003
Ethnic Designation	N/A	4.506[3]	.662	.342	4.085	2.380	2.895[1]
Preschool	.117	.564	.054	6.085	3.251	1.292	.233
Hrs. of EISS per Week	3.449[2]	6.579[3]	.986	4.323[3]	1.017	13.078[3]	13.742[3]

Variable	PPVT	LAS	MAS	DAM	VMI	TOBE LANG.	TOBE MATH
Parent Mtls.	.030	2.298	.370	1.085	.621	5.701[2]	6.515[2]
Health Concerns	.567	.564	.756	2.063	.140	.776	.612
Visual Concerns (POF)	1.157	.052	.094	.714	3.191	4.823[1]	1.397
Motor Concerns (POF)	1.248	.363	.072	1.716	.037	1.466	2.042
EISS Centers	17.620[3]	2.693	2.265	1.260	.000	6.009[1]	23.849[3]
Hearing Assess. (POF)	.551	.553	.384	.209	2.279	3.027	6.020[2]
Hearing Concerns (POF)	.759	1.790	.106	1.322	.161	5.185[2]	.899
Visual Assess. (POF)	.003	2.616	.020	.067	2.971	1.670	14.002
Time in Progress	4.755[3]	.993	1.695	4.914[2]	5.978[3]	5.228[2]	2.390

1 = ˣˣ significant at .05 2 = ˣ significant at .01; 3 = ˣˣˣ significant at .001

FIGURE 34



2. **Analysis Results**

The program variables, hours of EISS per week and total time in the program (months of instruction in using the EISS curriculum), showed the greatest number of significant interactions on outcome measures. The population characteristics of primary language and gender produced the most significant interactions among the non-program variables. As has been the case each year, program variables show a greater impact on post-screening gains than do non-program factors.

G. EDUCATIONAL SIGNIFICANCE

The term "educational significance" has been used in this report. Some background regarding this term is provided by Tallmadge (1977):

> The issue of educational significance, unlike that of statistical significance, is not a technical question. It has been termed a matter of common sense, but the sense is often not common--that is, different judges cannot agree. In any case, educational significance is a matter of judgment.
>
> In judging the educational significance of an intervention's impact, two factors must be considered: the size of the effect and the importance of the area in which it happened. There ought to be a reasonable balance between the two factors. The chance that a small gain would be considered educationally significant is higher in a broad or educationally important area than in a narrow or less important area.
>
> While the concept of cost effectiveness is relevant, it must not be taken as the sole criterion for educational significance. Interventions that work in some settings for pupils with particular needs will not necessarily work in other settings or for pupils with somewhat different needs. It would probably be quite inappropriate, for example, to make cost-effectiveness comparisons among projects serving (a) urban ghetto children, (b) bilingual migrant children, (c) visually handicapped children, (d) dyslexic children, and (e) institutionalized delinquent children.
>
> An educationally significant effect is one of nontrivial magnitude, in a content area generally accepted as important, which can be achieved at a reasonable cost. The fact that these three dimensions are all inter-dependent makes the establishment of strict cut-off values impossible. The further complication that interventions serving different types of children in different settings can be expected to have different sized impacts at different costs makes the decision making process an extremely complex judgmental matter.
>
> Theory, past experience, and expert judgments have been invoked in weighing the size of educational effects.

Based on past experience of educators and other studies (Slavin, 1987, Carter, 1984, and EPSF Evaluation Reports) regarding "at risk" students --typically "at risk" students show increasing deficits or small gains (1 to 3 percentile rank increases) when compared to normal populations.

At risk students in this project have exceeded these gains on the PPVT, VMI, and TOBE demonstrating educationally significant gains in learning and achievement. Based on the evaluation of ECIA Chapter I (Title I) studies of compensatory education, Flanagan (1951) and Tallmadge (1982) suggested that a "year's growth" for disadvantaged at risk students showed evidence of relative academic progress. The view that at risk students are reducing the gap between themselves and the normal population was considered an educationally significant gain. EISS Project interventions have shown that they are reducing the gap between these pre-screening levels of achievement and post-screening levels of achievement when compared to the normative population.

IV. RATES OF RETENTION AND PLACEMENT

EISS research is examining several questions in an attempt to see what impact the program may have on retentions in grade and placements in special education. The first three questions look at the effect on retentions in grade and the program's expressed intent to reduce this practice. The whole body of research on retention overwhelmingly concludes that holding children back and placing them out of their modal grade is a failed policy. Yet teachers and parents concerned about the readiness of their students continue to hold many back.

A. RATES OF RETENTION

EISS is attempting to reduce retentions in grade. Training efforts have been devoted to communicating to teachers and support staffs what the research says about retention. The whole structure of the program attempts to improve performance in the first year of school This is an essential component in helping teachers reduce the practice of retention. The program also has increased efforts to train first grade teachers in order to help them accept and plan for children who without individually and developmentally appropriate instruction would be at risk of school failure.

1. Are experienced program teachers retaining fewer children in grade than they did before introducing the program?

Teachers in the program are asked to complete a questionnaire on which they report class sizes, numbers retained, and numbers placed in special education for the current year and their two prior years of teaching experience.

A portion of these teachers are participating in longitudinal studies of the program and have completed the questionnaire in multiple years. As the program has grown, new schools have joined the longitudinal studies. The data detailed below was gathered from three clusters of teachers. The first cluster reports on two years of pre-program experience during 1984-85 and 1985-86 and three program years. The second cluster reports on two prior and two program years. The third cluster reports on two pre-program years and one year of experience in the program.

The program seems to be influencing schools to retain fewer children. In these reports, a combined retention rate of 9.45% in pre-program years is compared to a retention rate of 5.93% during the program years, over 37% fewer retentions in grade.

TABLE 34
RATES OF RETENTION: SCHOOLS IN EISS LONGITUDINAL STUDIES

Each year teachers are asked to report how many children were held back in their classes during the current year and the two prior years. Because these reports have been repeated by teachers in the longitudinal study schools, the cumulative experience of years prior to EISS can be compared to three years of experience during the program.

Retention Rates Prior to Entering EISS: 9.45%

School Types	Year EISS Introduced	Prior Years Reported	Number of Classes	Number of Students	Number Retained	Rate
Urban, Suburban, Rural	1986-87	84-85, 85-86	17	505	64	12.67%
Urban, Suburban, Rural	1987-88	85-86, 86-87	29	859	76	8.85%
Urban	1988-89	86-87, 87-88	15	478	34	7.11%
Totals:			61	1842	174	
Average:						9.45%

Retention Rates During EISS Implementation: 5.93%

School Types	Year EISS Introduced	Years Reported	Number of Classes	Number Students	Number Retained	Rate
Urban, Suburban, Rural	1986-87	86-87 to 88-89	29	886	63	7.11%
Urban, Suburban, Rural	1987-88	87-88, 88-89	25	686	33	4.81%
Urban	1988-89	1988-89	8	250	12	4.80%
Totals:			62	1822	108	
Average:						5.93%

Analysis

This sample includes 61 classes prior to the program and 62 during the program. While the sample is small, it is representative in two very important ways. The sample includes classes in rural, urban, and suburban schools located in Northern, Central, and Southern California. The sample also includes high retaining and low retaining districts. The first cluster includes a high retaining rural district (over 10%). The third cluster is influenced by low retaining urban schools (under 3%). However, each cluster shows a marked reduction in retentions after joining the program. And the first cluster, reporting over two pre-program and three program years, gives some indication that teacher behavior is being influenced toward fewer retentions.

2. **Does a similar reduction in retentions appear in comparable schools in the districts studied?**

Schools participating in the longitudinal studies each select a comparable non-program school. These schools are matched by socioeconomic status index, percentages of minority students, geographic area, and size. Teachers in these control schools complete the same questionnaire used in the longitudinal study schools to report class sizes, rates of retention in grade and placements in special education.

The table below displays the responses of kindergarten teachers in comparable non-program schools within the longitudinal study districts.

TABLE 35

RATES OF RETENTION: CONTROL SCHOOLS IN EISS LONGITUDINAL STUDIES

Each year teachers were asked to report how many children were held back in their classes during the then current year and the two prior years. Control school teachers began reporting in 1986-87. Their reports on children retained are displayed in the same array of preprogram and program years as was used in the previous table.

Retention Rates of Controls During Preprogram Years: 7.60%

Rate	School Types	Years Reported	Number of Classes	Number of Students	Number Retained
8.00%	Urban, Sub-urban, Rural	84-85, 85-86	9	275	22
9.98%	Urban, Sub-urban, Rural	85-86, 86-87	22	661	66
4.03%	Urban	86-87, 87-88	15	472	19
Totals:			46	1408	107
Average:					7.60%

Retention Rates of Controls During EISS Years: 8.02%

School Types	Years Reported	Number of Classes	Number Students	Number Retained	Rate
Urban, Sub-urban, Rural	86-87 to 88-89	21	600	49	8.17%
Urban, Sub-urban, Rural	87-88, 88-89	18	528	54	10.23%
Urban	1988-89	8	256	8	3.13%
Totals:		47	1384	111	
Average:					8.02%

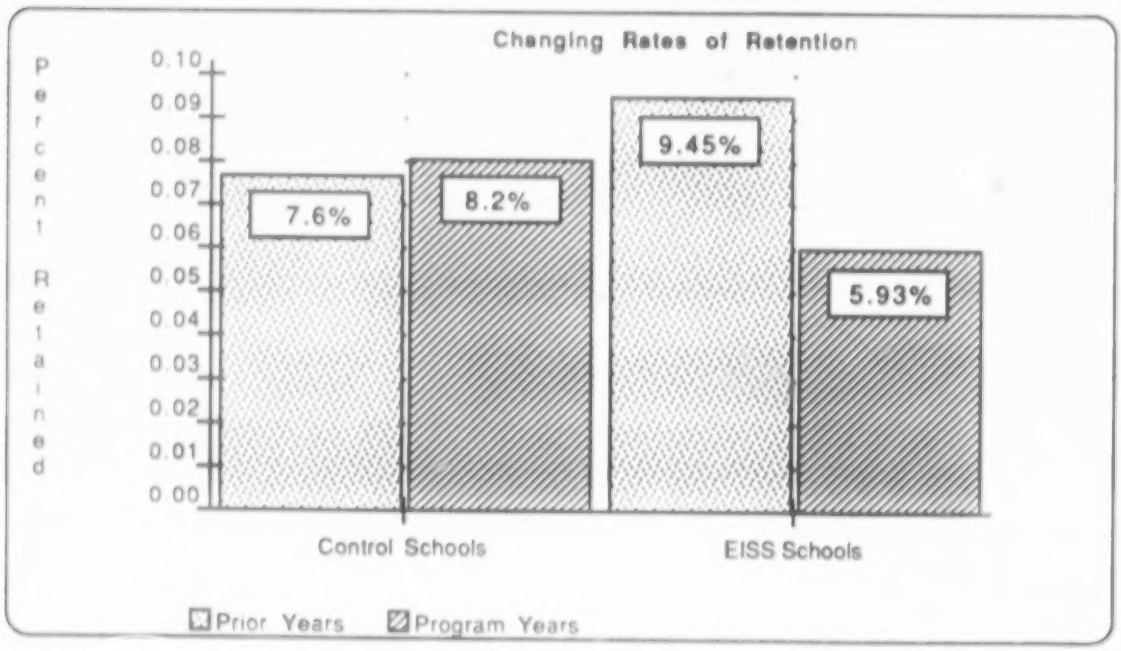
Analysis

This sample has the same characteristics as the longitudinal sample with which it is compared. The three clusters of teachers are from non-program schools in the same districts. The sample has a like mix of urban, rural, and suburban schools and a like mix of high retaining schools (in the first two clusters) and low retaining urban schools (in the last cluster).

During the preprogram and program years being studied, the first two clusters of control schools show an increase in rates of retention in grade. The third cluster shows a decrease in their retention rate, in one year of experience, of less than one percent. Averaged over the first three program years and two prior years for each teacher, the rate of retention in the program schools has decreased significantly while the rate of retention has increased slightly in the comparable non-program schools. While concern about rates of retention has been publicized by the State Department of Education and by the EISS Program among others, the rate reduction in the program schools does not appear to be attributable to a general change in district policy.

The following figure illustrates the changes in rates of retention between program and non-program schools over the years prior to and during the EISS Program.

FIGURE 35



3. **Do EISS teachers retain fewer children during their first year in the program?**

The teacher questionnaires described above are completed by each program teacher at the end of their first year in the EISS program. During the three years of EISS, 240 teachers have reported rates of retention for their first program year and their two prior years of teaching experience. All kindergarten classes included in these reports, a total of 599 classes, are included in the following table.

TABLE 36

CHANGING RATES OF RETENTION: NEW EISS TEACHERS REPORT PRIOR YEARS

Teachers from each program year report on their beginning year in EISS and two prior years.

Two Years Prior to EISS: 7.18%

Years Reported	Number of Classes	Number of Students	Students Retained	Retention Rate
1984-85 & 1985-86	106	3138	242	7.71%
1985-86 & 1986-87	115	3418	256	7.49%
1986-87 & 1987-88	138	4250	278	6.54%
Totals:	359	10,806	776	
Average Rate of Retention:				7.18%

First Year in EISS: 5.55%

Years Reported	Number of Classes	Number of Students	Students Retained	Retention Rate
1986-87	69	1983	142	7.16%
1987-88	87	2540	174	6.85%
1988-89	84	2474	72	2.91%
Totals:	240	6,997	388	
Average Rate of Retention:				5.55%

Analysis

In each program year, new teachers have reported retaining fewer students after their first year in EISS than they did during the two prior years. The average reductions in rates of retention range from 0.55% to 3.63%. When the three years of program experience are compared to the cumulative six years of pre-program experience reported, the 240 teachers report changing their rate of retention from 7.56% to 5.55% or 26.6% fewer students retained overall.

This sample includes 17,803 students over the years from 1984-85 to 1988-89. The schools are located in 98 districts distributed through 30 California counties. They represent all geographic areas and the wide demographic range of California students.

This large sample, considered together with the smaller sample of schools which have reported two and three years of experience in the program (question 1), indicates that EISS is succeeding in reducing the practice of retaining young children and keeping them in their modal grade.

4. **Summary: Rates of Retention**

In the longitudinal study sample of EISS Program schools, teachers report retaining fewer children after joining the EISS Program. The majority of the teachers in this sample reported on two or three years of program experience indicating that the reduction in retention rates continues after the first year of the program. When these reports are compared to the reports of teachers in matched control schools, it is evident that comparable schools in the same districts have not only not reduced rates of retention during the same years, but have, in fact, slightly increased their retention rates.

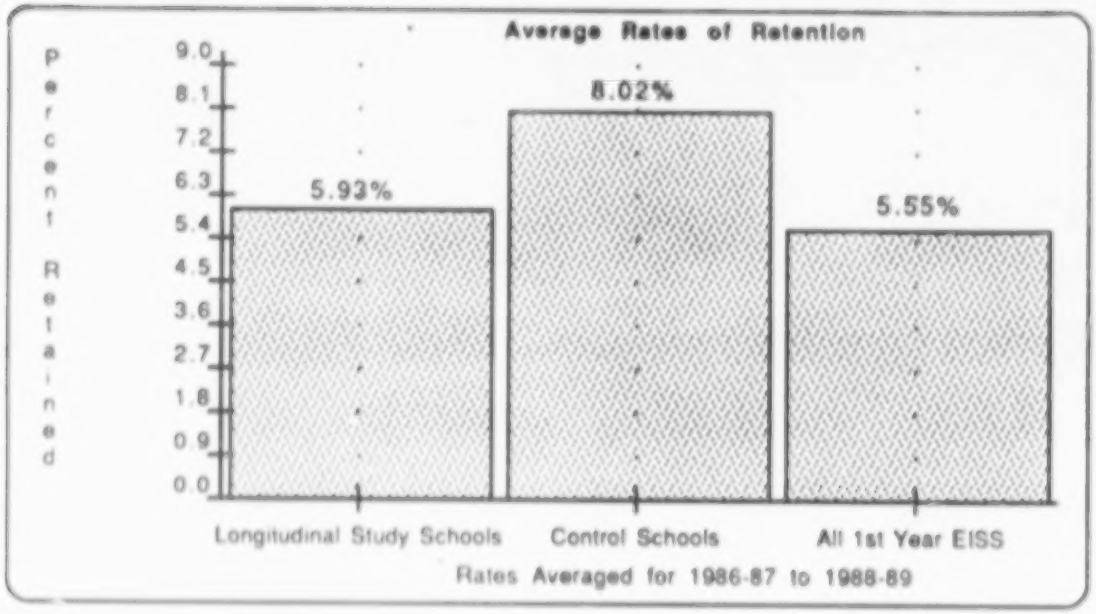
When the reports of teachers new to the program are examined it is apparent that rates of retention are lower for each group of teachers during their first year in the program than they were during the teachers' prior two years of teaching. The retention rates, reported by each sample and averaged over three program years, are displayed in the following table and figure.

TABLE 37

RATES OF RETENTION COMPARED: SUMMARY FOR THE THREE PROGRAM YEARS

EISS Longitudinal Study Schools:	5.93%
Controls Matched to Longitudinal Study Schools:	8.02%
All First Year EISS Implementors:	5.55%

FIGURE 36


Average Rates of Retention
Percent Retained
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7
1.8
0.9
0.0
5.93%
8.02%
5.55%
Longitudinal Study Schools
Control Schools
All 1st Year EISS
Rates Averaged for 1986-87 to 1988-89

B. RATES OF PLACEMENT IN SPECIAL EDUCATION

EISS research is also trying to determine what effects the program may have on placements in special education. Since the program screens all beginning kindergarten students, it is expected that a few children suspected of having learning problems will be discovered early, referred for special education assessment, and placed. When looking at a large population sample, we would expect to see at least a slight increase in special education placements during kindergarten.

However, the EISS Program places its major emphasis on providing developmentally and individually appropriate instruction. If student achievement improves and fewer children remain at risk of school failure as they move through the primary grades, there could be a reduction in special education placements as teachers and students experience more success. The program should be expected to contribute to fewer special education placements in later grades if more children are better prepared to learn to read and write. The following questions examine reports from teachers with one to three years of experience in the program, a like group of non-program teachers, and reports from a large number of teachers after their first year in EISS. The first three questions examine the kindergarten year. The next question looks at later years of student experience. The last question raises an issue of related interest: program impact on the quality of special education referrals.

1. Are placement rates during kindergarten changing among experienced EISS teachers?

The following table displays the reports of teachers with one to three years of program experience.

TABLE 38

RATES OF PLACEMENT: SCHOOLS IN EISS LONGITUDINAL STUDIES

Each year teachers are asked to report how many children were placed in special education from their classes during the current year and the two prior years. Because these reports have been repeated by teachers in the longitudinal study schools, the cumulative experience of years prior to EISS can be compared to three years of experience during the program.

Placement Rates Prior to Entering EISS: 1.19%

School Types	Year EISS Introduced	Prior Years Reported	Number of Classes	Number of Students	Number Placed	Rate
Urban, Suburban, Rural	1986-87	84-85, 85-86	17	505	8	1.58%
Urban, Suburban, Rural	1987-88	85-86, 86-87	29	859	6	0.70%
Urban	1988-89	86-87, 87-88	15	478	8	1.67%
Totals:			61	1842	22	

Average Rate Prior to EISS: 1.19%

TABLE 38 continued

Placement Rates During EISS Implementation: 0.88%

School Types	Year EISS Introduced	Years Reported	Number of Classes	Number Students	Number Placed	Rate
Urban, Sub-urban, Rural	1986-87	86-87 to 88-89	29	886	6	0.68%
Urban, Sub-urban, Rural	1987-88	87-88, 88-89	25	686	7	1.02%
Urban	1988-89	1988-89	8	250	3	1.20%
Totals:			62	1822	16	
Average Rate During EISS:						0.88%

Analysis

In this sample of 1,842 kindergarten children prior to the program and 1,822 children taught during the program, six fewer children were placed in special education during the program years.

2. **How does this change in rates of placement compare to non-program schools?**
   The following table illustrates special education placements in matched control schools over the same years.

TABLE 39

RATES OF PLACEMENT: CONTROL SCHOOLS IN EISS LONGITUDINAL STUDIES

Each year teachers were asked to report how many children were placed from their classes during the then current year and the two prior years. Control school teachers began reporting in 1986-87. Their reports on children placed are displayed in the same array of preprogram and program years as was used in the previous table.

Placement Rates of Controls During Preprogram Years: 1.28%

School Types	Years Reported	Number of Classes	Number of Students	Number Placed	Rate
Urban, Suburban, Rural	84-85, 85-86	9	275	5	1.82%
Urban, Suburban, Rural	85-86, 86-87	22	661	12	1.82%
Urban	86-87, 87-88	15	472	1	0.21%
Totals:		46	1408	18	
Average Rate Prior to EISS Years:					1.28%

Placement Rates of Controls During EISS Years: 1.16%

School Types	Years Reported	Number of Classes	Number Students	Number Placed	Rate
Urban, Suburban, Rural	86-87 to 88-89	21	600	9	1.50%
Urban, Suburban, Rural	87-88, 88-89	18	528	7	1.33%
Urban	1988-89	8	256	0	0.00%
Totals:		47	1384	16	
Average Rate During EISS Years:					1.16%

Analysis
In this sample of 1,408 kindergarten children prior to the program years and 1,384 children taught during the program years, two fewer children were placed in special education during the program years.

3. **Do first year program teachers report more special education placements after their first year in the program?**
The following table displays the reports of all first year program teachers.

TABLE 40

CHANGING RATES OF PLACEMENT: NEW EISS TEACHERS REPORT PRIOR YEARS
Teachers from each program year report on their beginning year in EISS and two prior years.

Two Years Prior to EISS: 1.66%

Years Reported	Number of Classes	Number of Students	Students Placed	Placement Rate
1984-85 & 1985-86	106	3138	51	1.63%
1985-86 & 1986-87	115	3418	65	1.90%
1986-87 & 1987-88	138	4250	63	1.48%
Totals:	359	10,806	179	
Average Rate of Placement:				1.66%

First Year in EISS: 2.06%

Years Reported	Number of Classes	Number of Students	Students Placed	Placement Rate
1986-87	69	1983	40	2.02%
1987-88	87	2540	49	1.93%
1988-89	84	2474	55	2.22%
Totals:	240	6,997	144	
Average Rate of Placement:				2.06%

Analysis
In this much larger sample of 17,803 kindergarten children, teachers report an increase in the rate of placements during their first program year compared to their prior two years. In each year of the program, teachers report an increase in special education placements from the prior two years. However, for the 87 classes reported in 1987-88 the increase is negligible.

4. **Summary: Rates of Placement in Kindergarten**
The following table illustrates special education placements reported in their first program year by each of nine groups of teachers. The reports include longitudinal study schools, matched control schools, and all first year program implementors.

TABLE 41

RATES OF PLACEMENT COMPARED SUMMARY OF ALL EISS FIRST YEARS

EISS Longitudinal Study Schools: 0.88%

Years Reported	Number of Classes	Number of Students	Number Placed	Rates of Placement
1986-87	14	434	3	0.69%
1987-88	27	779	9	1.16%
1988-89	21	609	4	0.66%
Totals:	62	1822	16	
Average Rate of Placement:				0.88%

Controls Matched to Longitudinal Study Schools: 1.18%

Years Reported	Number of Classes	Number of Students	Number Placed	Rates of Placement
1986-87	7	214	2	0.93%
1987-88	21	617	9	1.46%
1988-89	18	523	5	0.96%
Totals:	46	1354	16	
Average Rate of Placement:				1.18%

All First Year EISS Implementors: 2.06%

Years Reported	Number of Classes	Number of Students	Number Placed	Rates of Placement
1986-87	69	1983	40	2.02%
1987-88	87	2540	49	1.93%
1988-89	84	2474	55	2.22%
Totals:	240	6997	144	
Average Rate of Placement:				2.06%

Analysis

In the longitudinal study schools and their matched controls, the numbers of special education placements are small and the sampling is probably not indicative of major trends. The rate of placement in the longitudinal study schools is three tenths of one percent less than the rate in the control schools. However, the placement rate in the control schools is almost nine tenths of a percent less than the rate of all first year EISS teachers. The differences may be due primarily to district policies where the longitudinal and control schools are located.

Unlike rates of retention in kindergarten, with special education placements, it is much more difficult to separate program from non-program schools. The program depends in part upon building a closer working relationship between kindergarten teachers and support staff. In most districts, support staff involvement in the program includes the school psychologist. This person is the most critical decision maker in special education placements and is usually assigned to several schools within a district. Therefore, the difference between the longitudinal and control schools is more clouded on the question of placements than it is on the question of retentions.

5. **Are EISS students less likely to be placed in special education in later years?**

   In an attempt to answer this question, EISS has obtained class lists from both program and non-program schools beginning with the 1986-87 kindergarten class. The local schools are asked to update these lists each year in order to determine how many children from the original sample have moved away from the school, been referred to, or placed in special education among other factors. The following table illustrates the class list reports for the 1986-87 and 1987-88 classes.

TABLE 42

SPECIAL EDUCATION PLACEMENTS COMPARED

EISS Longitudinal Study Schools:

Kindergarten Class of	Grade Reported	Number of Students	Number Placed	Rates of Placement
1986-87	Kindergarten	222	3	1.35%
	First	196	7	3.57%
	Second	149	0	0.00%

Controls Matched to Longitudinal Study Schools:

Kindergarten Class of	Grade Reported	Number of Students	Number Placed	Rates of Placement
1986-87	Kindergarten	165	3	1.82%
	First	149	6	4.03%
	Second	140	7	5.00%

TABLE 42 continued

EISS Longitudinal Study Schools:

Kindergarten Class of	Grade Reported	Number of Students	Number Placed	Rates of Placement
1987-88	Kindergarten	607	11	1.81%
	First	578	11	1.90%

Controls Matched to Longitudinal Study Schools:

Kindergarten Class of	Grade Reported	Number of Students	Number Placed	Rates of Placement
1986-87	Kindergarten	465	19	4.09%
	First	454	9	1.98%

Analysis

A trend is more evident here than in the teacher reports. Placements may be declining as children move through the primary grades. However, the sample for the 1986-87 class is too small to be definitive. The 1987-88 class is too young. If education in EISS classrooms does reduce a child's likelihood of being placed in special education, the effect would not be expected to be evident until second grade and may be more pronounced as children encounter the more academic demands of the third grade curriculum.

6. **Does EISS improve the quality of referrals to special education?**

The answer to this question is not clear from the data. Teacher questionnaires ask: how many students were referred to special education; how many were placed. A "yes" answer to the question of placement has a clear meaning. However, a "yes" to the question of referral could mean: the student was mentioned to the psychologist as a potential candidate; the child was referred to a child study team; a formal referral for assessment was completed; or, all three.

The data does indicate that more referrals are being made and the increase in referrals is greater than the increase in placements. Hopefully, this means that a major goal of the program is being realized: more professional discussion regarding young children is taking place between teachers and special educators. This certainly should be expected given the requirements of EISS.

The program requires team screening and individualized instruction. After the program is in place, referrals to special education can be made with better evidence. The screening data is available. More importantly, there is also a record of appropriately designed instruction which has focused on the child's learning strengths and needs. These expectations are not as important, however, as what the program may mean in individual cases.

The following unsolicited report from a school psychologist illustrates the kind of impact the program can have by providing early information. The caller explained that the program was worthwhile to his district on the basis of two individual cases.

In the first case, the child displayed an unusual pattern of scores during the screening, but no overtly unusual behavior. The program had also given the psychologist a chance to observe the child closely. Further assessment discovered serious learning handicaps and an early special education placement.

In the second case, the youngster gave the general appearance of being immature or a low achiever. However, the screening revealed above average abilities and inconsistent patterns of response. Further probing revealed that the child had witnessed the suicide of a parent and that the family had been reluctant to share the information. The child was immediately placed in counseling.

Analysis

It is impossible to know how much later these two cases might have come to the attention of school professionals. We only know that each case was significant enough that one professional volunteered them as examples of the worth of the program.

While we cannot say with any statistical assurance that EISS improves the quality of referrals, there is a marked increase in referrals reported and a small increase in special education placements. This likely means that more discussion is taking place between classroom teachers and special educators and the requirements of the program provide structured observations of children as a basis for those discussions.

7. **Site Comparisons**

Each school that participates in the longitudinal studies is asked to identify a control site in their area. The schools in both groups are compared for type, number of classrooms of the same grade, enrollment size, socioeconomic status, and percentage of minority students. Table 43 illustrates the match of the longitudinal or target schools with the control sites.

TABLE 43
COMPARISON OF LONGITUDINAL (EISS)
AND CONTROL SCHOOLS

Category	EISS Schools	Control Schools
Mean Socioeconomic Status	1.95	1.99
Percentage Minority Population	39.88	33.25
Total Students Enrolled	5095	6333
Classrooms Participating	32	32

V. COST BENEFIT ANALYSES

The cost benefit analyses will examine the costs of the program to the State of California, the total costs per school including local contributions, and derive a cost per student. Benefits of the program will be examined in light of probable savings from reduced retentions in grade and possible savings from fewer special education placements in later grades. Costs of the program will also be compared to the costs of later intervention: specifically, the cost of recovering school dropouts.

A. STATE COSTS PER SCHOOL

The Early Intervention for School Success Program is managed by the Orange County Department of Education through a contract with the State Department of Education. In the following table, the total contract amounts are displayed through the 1990-91 fiscal year. During the first three full program years, 60% of the total expense was devoted to administration and development, 40% to local school support. With the completion of major administrative tasks such as test development and the addition of a new Project Specialist assigned to technical assistance, this ratio has been reversed in the 1989-90 fiscal year to 37% administration and 63% local school support.

TABLE 44

EISS STATE EXPENDITURE BY YEAR

Year	Administration, Development & Maintenance	%	Technical Assistance to Local Schools	%	Grants to Schools	%	Total State Contracts with EISS
Spring,1986	69,002	73%	25,091	27%	0	0%	94,093
1986-87	192,004	61%	24,246	8%	98,750	31%	315,000
1987-88	242,912	56%	27,088	6%	160,000	37%	430,000
1988-89	250,005	58%	32,995	8%	147,000	34%	430,000
1989-90	231,273	37%	109,727	18%	279,000	45%	620,000
1990-91	242,446	32%	178,554	24%	329,000	44%	750,000
Subtotals	1,227,642		397,701		1,013,750		2,639,093

Technical assistance includes direct expenditures for support to local schools, trainer support, and Trainer Institute preparation expenses.

Calculations of technical assistance:

Spring, 1986:	The total of contracted expenditures to conduct the first Trainers Institute.
1986-87, 87-88, 88-89:	Estimated at 30% of Project Specialist and secretarial time plus contracts for training efforts and some site visits.

Analysis

The program was introduced into 199 schools during the first three years. It has been discontinued in 18. On a per school basis, the state has expended $7,012 per school to introduce the program in sites where it has continued. This cost will continue to decrease.

The decrease will occur for two reasons. First, the number of dissemination schools where the program is being introduced entirely at local expense is out-pacing those dropping out of the program by 63 to 18. Furthermore, half of the dissemination schools have grown from schools that were funded in the first year of the program. During the 1989-90 year 45 new grants were awarded. With these 45 $5,000 grants, funded districts introduced the program into 53 schools and have, as of this writing, already disseminated it into another three schools. If these districts are as successful as the 1986-87 schools, in 1992-93 we can expect the program to have been successfully implemented in 102 schools from the investment of those 45 grants. This growth is dependent on continued administrative support and technical assistance to schools and trainers. This high level of program dissemination from schools will continue to lower the cost of initiating the program.

The second reason for a decrease in state expense per school is that the administrative and maintenance costs are decreasing as a proportion of the total cost of the program to the state. These percentages were displayed in Table 44.

B. LOCAL COST OF THE PROGRAM

1. Grant Contribution

The $5,000 implementation grant is designed to pay for all first year direct expenses except the cost of substitute teachers during the screening of students. The following table displays all of the costs covered by an implementation grant in the typical funded school, that is, a school with four kindergarten classrooms.

TABLE 45
SAMPLE BUDGET FOR A $5,000 GRANT
Major Activities/Cost Calculations based on pilot project of four classrooms

Training Child Study Teams		
1. EISS trainer fees: $225/day x 3 training days=		$675
2. Teacher release time or honorariums (For inservice days or screening during summer or Fall term)		
4 Teachers x 3 days x $75 (average sub. rate)=	900	
Subtotal		$1575
Screening Materials (based on 2 screening teams)		
1. EISS screening kit: $60 x 2 teams=	120	
2. PPVT administration manuals: $86 x 2 teams=	172	
3. VMI administration manuals: $15 x 2 teams=	30	
4. Student Scoresheets (30 per class x 4 classes=120 students)		
PPVT scoresheets: $ .40 x 120 students=	48	
VMI scoresheets: $1.00 x 120 students=	120	
Subtotal		490
Instructional Materials		
1. Basic classroom resource guides per classroom		
Implementing a Developmental Program	6	
Management Guides (set of 5)	35	
Parent Activity Cards	36	
Building Readiness Through Perceptual-Motor Experiences	8	
Portable Resource Kit Guide	7	
Recipes for Homemade Teaching Materials	7	
Unit/Theme Books (3/sets x $8.00)	24	
Easy Ways to Implement Learning Centers	8	
Reading and Writing...Can Be a Child's Talk Written Down	15	
Gifted Literature Folders (6 x $7.25)	44	
	190	
Subtotal: One set ($190) per classroom (4)=		760
2. DLM Box of Manipulative Materials (2 X $400)		800
3. School resources:		
Parent Teachers: Keys to Success (2 X $27.50)	55	
EISS Awareness Videotape	20	
Subtotal		75
Shipping, Handling and Tax		
15% (averaged and based on all commercial vendors)		300
Trainers Institute		
Institute fees and travel	1000	
Total Expenses		$5000

The $5,000 grant amount has proven to provide adequate funding for these initial expenses. Not every school expends the full amount of the grant. In the table below, the final expenditure reports for the 1988-89 grants are displayed. Eight schools reported expenditures of less than the award and seven reported spending in excess of the award with the remainder claiming $5,000. Final expenditure reports from the previous two years were arrayed in almost the same distribution.

TABLE 46

AMOUNTS CLAIMED BY EACH SCHOOL ON THE FINAL EXPENDITURE REPORT

Eight Schools Did Not Claim the Full Grant Award	Nine Claimed:	Seven Claimed More:
$3,128.00	$5,000.00	*$15,495.00
$3,993.53	$5,000.00	$5,030.37
$4,088.00	$5,000.00	$5,030.37
$4,656.00	$5,000.00	$5,091.00
$4,685.07	$5,000.00	$5,580.28
$4,735.72	$5,000.00	
$4,932.00	$5,000.00	
$4,991.87	$5,000.00	
	$5,000.00	

*Grant included 3 schools at $5,000 each

Analysis

A $5,000 grant will provide for the initial training of the child study team, all screening and curriculum materials, and the cost of having one staff member trained as a trainer. Additional training, which may be required for new staff in future years will cost in teacher release time, but in the second year a certified trainer should be available within the funded school. All materials, with the exception of screening scoresheets, are non-consumable and should last for several years. As district's expenditure claims indicate, $5,000 has proven adequate thus far to seed the program in a local school.

2. Local Contribution

In a majority of schools, the cost of teacher release time for training is covered by the grant, but release time for screening is not. A full day, 6 to 6 1/2 hours, is required to screen one class and it is expected that four to five full days will be devoted to pre-screening. Post-screening is required only for children who were identified as at risk in the fall and so takes considerably less time. The screening team is made up of two classroom teachers and three support staff members who assist in screening and educational planning. Teachers are asked to screen their own students. While some schools, because of teacher team assignments or screening prior to school do not have substitute costs, schools of four classrooms are asked to plan for five pre-screening and two post-screening days during the school year.

Since support staff members will, in some cases, be reassigned to the task of kindergarten screening, some schools may see this reallocation of staff time as a program cost. The table below includes both direct teacher release time costs for screening and reallocation costs.

TABLE 47

LOCAL CONTRIBUTION COSTS

Direct Costs	Teacher Release Time			
Pre-screen	5 days @ $75	=	$375	
Post-screen	2 days @ $75	=	$150	
			$525	
Reallocation Costs				
Pre-screen	5 days X 3 staff @	$200 =		$3,000
Post-screen	2 days X 3 staff @	$200 =		$1,200
				$4,200

Analysis

Many schools have conducted kindergarten screening previously. For example, speech pathologists frequently screen all incoming children for language development and articulation. The most significant reallocation of staff time usually is the assignment of the school psychologist to administer the Visual Motor Integration and Draw-A-Man tests. However, for the purposes of the cost benefit analysis, we have included the time of all three support staff members.

C. PROGRAM COSTS PER CHILD

1. State Costs

The calculation of costs per child has been approached first through the State funded program costs and then through local school contribution. This division is especially helpful because the local contribution in the first year also serves as a good estimate of the annual cost to the local district of continuing the program after the grant funding ceases.

Earlier in this chapter the figure $7,012 was cited as the State cost per school to initiate EISS. This figure is derived simply by dividing the total cost of EISS through 1988-89 ($1,269,093) by the 181 schools actively implementing the program in the fall of 1989. This figure will be taken as the minimum state cost per school. For the purpose of finding a maximum per pupil cost, a more generous view of the state contribution will also be considered.

In the maximum calculation, the total EISS cost of $1,269,093 is divided by the 115 implementation grants awarded. The result is $11,036 per school. While the program expended $7,012 per school to achieve continuing implementation in 181 schools, other state education dollars from a variety of sources including district general funds were likely used to expand the program beyond the 115 implementation grant awards. While we can assume that expansion site costs which do not include the expense of training trainers are significantly less than the budgets of grant funded schools, these schools have not been required to submit budgets or expenditure reports. Therefore, the minimum and maximum calculations, while tedious, offer a realistic range of costs per child and the maximum calculation is generous.

Through 1988-89, all funded schools reported implementing EISS in an average of 3.75 classrooms. These classrooms served an average of 28.8 students. The per school population being 108 kindergarten children, we can establish that the State contribution is between $65 and $102 per child.

TABLE 48
PROGRAM COSTS PER CHILD

State EISS Costs Per School

$1,269,093 divided by 115 grants =	$11,036
$1,269,093 divided by 181 implementing schools =	$ 7,012

State EISS Costs Per Child

$11,036 per school divided by 108 students =	$ 102
$7,012 per school divided by 108 students =	$ 65

2. **Local Costs**

Table 47 above illustrated that the local district will, in most cases, contribute at least $525 of substitute time to complete pre and post screening. The reassignment of support staff time can be calculated to amount to as much as an additional $4,200. There may be simply a reassignment of duties, or if pre-screening is conducted before school begins, much of this amount may be a direct cost. However, the great majority of schools conduct pre-screening during the first month of school. The following table illustrates the minimum and maximum calculations of the local district contribution per child.

TABLE 49
LOCAL SCHOOL COSTS IN THE FIRST YEAR

Direct Costs, Teacher Release Time for Screening	=$525	Reallocation Costs, Support Staff Time for Screening	=$4,200
Divided by 108 children	=$4.86 per child	Divided by 108 Children	=$38.88 per child

Analysis

The state cost of the program ranges from a minimum of $65 to $102 per child. The local contribution ranges from about $5 per child to about $44 per child. The minimum and maximum program costs per child total $70 and $146 respectively. In order to assess the possible cost benefits of the program, the maximum calculation of $146 per child will be taken as the standard for what must be recouped.

D. COST BENEFITS

1. **Long Range Potential Benefits**

One of the expected long term benefits of EISS is to reduce the incidence of school drop-out by providing a successful beginning to children's educational careers. While EISS is too new to show an effect on drop-out rates in secondary schools, the potential of the benefit is great enough to warrant a brief look at the dollar figures involved.

Policy Analysis for California Education (PACE) released its report on California Partnership Academies in the fall of 1989. This report found the Academies to be cost beneficial even though they expended $41,000 over three years to recover one high school drop-out. PACE found that a savings to society of $77,500 would be realized by returning one student to school.

For an expenditure of $77,500, five hundred thirty-one students could be served by the EISS program at a maximum cost per student. More to the point, the PACE report shows that the partnership academies with the highest implementation ratings are realizing most of the program's benefit. A relatively inexpensive program like EISS is beneficial not just because it intervenes early, but because it works within the existing structure of schools to help teachers become more effective.

For a comparison to other early childhood programs, Head Start reports an annual average cost of $2,445 per child for a separate preschool program. (The Forgotten Half: Non-College Youth in America, 1988.) Looking within the existing school structure, Robert Slavin, evaluating the effectiveness of Chapter I programs, notes that they make small effects of one to three percentile points but that "perhaps we should not expect miracles for the modest sum of about $500 per student." (Slavin, 1987) EISS is much less expensive and is producing far greater gains.

It must be noted again that the predominant variable is program quality. Slavin found that the most effective Chapter I models are "comprehensive modifications of the regular classroom program that have been designed to enable teachers to better meet a wide range of student needs." His description reads like the components of the EISS program.

"Programs of high quality" is also a key description that is used in reports about the Perry Preschool Program and the Syracuse University Family Development Research Program. Both of these studies of early intervention efforts showed a very high return to society for efforts directed at very poor preschool children. A cost benefit analysis of the Perry Preschool Program showed a six to one return on a preschool program costing $5,000 per child. This program used the High Scope curriculum which is similar to and compatible with the EISS curriculum.

2. Savings Through Reduced Retention in Grade

A shorter term benefit of interest to local districts is the effect EISS appears to be having in reducing rates of kindergarten failure. Tables 34, 35, and 36 showed that EISS teachers are keeping fewer children back to repeat their kindergarten year. Teachers in the longitudinal study schools who reported one to three years of experience in the program have changed their retention rate from 9.45% to 5.93%. All program teachers, reporting their first year in the program, showed a rate change from 7.18% to 5.55%. These compare to continuing retention rates of 8.02% in comparable non-program schools. In the table below, these changing rates of retention are applied to the "typical" EISS school of 108 kindergarten students.

TABLE 50

REDUCTIONS IN RETENTION FOR THE TYPICAL SCHOOL

Group	Retention Percentage Change	Retentions per School
Longitudinal Teachers	9.45% to 5.93%	10.2 to 6.4
First Year Teachers	7.18% to 5.55%	7.8 to 5.9
Control Teachers	7.60 to 8.02%	8.2 to 8.7

Analysis

The more experienced program teachers are retaining four fewer children in the typical school size of 108. First year program teachers are retaining two fewer children per school than they did previously. In 1988, California spent an average of $3,880 per child in the regular program. Using the base figure, if the experience of the first group of teachers is displayed as a portion of the 108 children in the average sized EISS school, the net savings to the district from reduced retentions is four children times $3,880 or $15,520. If the experience of first year only teachers is applied to 108 students, the net cost reduction would be half that amount or $7,760. In the table below, we see minimum and maximum costs of the program for the first year and for the second and continuing years.

TABLE 51
COSTS PER SCHOOL

	Minimum	Maximum
First Year Costs	$7,560	$15,768
Second and Continuing Years* (Local District Costs)	$ 691	$ 4,471

*Includes screening personnel and materials costs.

The next table displays the potential benefit if two or four fewer children are retained in a group of 108 children. If this reduced rate of retention continues, then the annual savings would continue at a high rate while the program costs drop dramatically after the start-up year.

TABLE 52
BENEFIT FROM REDUCED RETENTIONS

2 Fewer Retained Among	108 children	$ 7,760
4 Fewer Retained Among	108 children	$15,336

Analysis

The maximum savings shown reducing retentions is nearly equal to the maximum first year program costs. In the second and later years of the program, four fewer retentions among 108 children would save $15,336 for each class against a maximum continuing program cost of $4,471. If two fewer children were retained in the second and subsequent years, the program would pay for all costs including reallocating support staff and would save $3,289 for each class year.

There is an even longer range benefit to society in reducing the rate of kindergarten failure and grade repetition. The rate of school dropout is twice as high (31 percent) for students who have repeated a grade "as for those who had not (14 percent)." (National Center for Education Statistics, 1988)

We can only speculate on this potential benefit. If more appropriate instruction, early school success, and keeping children in their modal grade keeps only a very small percent of students in school, the end benefit to society would still be enormous.

3. **Special Education Cost Reductions**

The increased achievement being shown by EISS children is expected to result in fewer placements in special education as they move through the primary grades. Handicapped children who were identified earlier as a result of this program can be expected to exit sooner from special education and to require less expensive placements.

The potential for savings is dramatic given the modest cost of the EISS Program. Using the 1988 regular classroom instructional rate of $3,880 per child in California, this average cost rises to $5,229 for children in regular classes who are pulled out for special education instruction and to $7,819 for learning disabled children in special classes. (Singer and Raphael, 1988) The additional costs per child are $1,349 and $3,939 respectively.

The maximum EISS program cost per child in the first year is $146. This includes all State and Local expenditures. In the second and subsequent years, the maximum cost for the program per child is $45.

The addition of special education services is, of course, dramatically more expensive, but necessary for children who truly are handicapped. The EISS Program may assist schools in identifying a few handicapped children earlier. This is not only good practice, but is, in itself, cost effective in the long run. Early intervention is less expensive in the long run in special education as well as in regular classroom program. (State Department of Education, Special Education Report, 1987.) The EISS Program is especially concerned that children be correctly identified and that appropriate regular classroom intervention is available and well utilized. If the program results in savings of special education costs it will most likely occur through fewer children failing to meet the academic demands of reading and writing effectively as they move into second and third grades.

In the scenarios below, special education costs are compressed into grades K through 4 in order to illustrate the dramatic cost differences which can occur through serving two fewer children in special education and being able to provide a less restrictive setting for one child. The first scenario is based on a special education placement rate of 9.25%. The second scenario illustrates the savings which would accrue if one special day class child is served instead in a Resource Specialist Program and if two children do not need RSP or DIS services. This savings is compared to the cost of EISS at the maximum calculation.

TABLE 53
FIVE YEAR COST SCENARIOS FOR 108 CHILDREN (Dollars in 1000's)
Year One: Grades K-4, No EISS

Program	K	1st	2nd	3rd	4th	Total
Regular Classroom Instruction @$3,880	419	419	419	419	419	2,095
3 Children Placed In Special Day Class @ added cost of $3,939		11.8	11.8	11.8	11.8	47.2
7 Children Receive Special Education RSP or DIS @$1,349		9.4	9.4	9.4	9.4	37.6
Total Five Year Cost						**$2,179,800**

Year Two: Grades K-4, EISS Introduced in K (Dollars in 1000s)

Program	K	1st	2nd	3rd	4th	Total
Regular Classroom Instruction	419	419	419	419	419	2,095
EISS in Kindergarten	15.8	----*	-----	-----	-----	15.8
2 Children in SDC		7.98	7.98	7.98	7.98	31.92
6 Children need Special Education RSP or DIS		8.09	8.09	8.09	8.09	32.36
Total with EISS						**$2,175,080**
Net Savings						**$ 4,720**

*There is no EISS Program cost for this class after the year of intervention.

Year Three: Grades K-4 of Second EISS Class (Dollars in 1000s)

Program	K	1st	2nd	3rd	4th	Total
Regular Classroom Instruction	419	419	419	419	419	2,095
EISS in Kindergarten	4.7	----*	-----	-----	-----	4.9
2 Children in SDC		7.98	7.98	7.98	7.98	31.92
6 Children need Special Education RSP or DIS		8.09	8.09	8.09	8.09	32.36
Total with EISS						**$2,164,180**
Net Savings						**$ 15,620**

*There is no EISS Program cost for this class after the year of intervention.

Classes of EISS children and their counterparts from the kindergarten classes of 1986-87 and 1987-88 are being followed closely. Over the next three years, the program could show a significant cost benefit if only one or two children among 108 did not require special education placements.

Analysis

If two fewer children are placed in Special Education, the savings over four years exceeds the maximum total first year costs of EISS (including all State and local expenditures). Since the program is much less expensive to continue in the local school, savings from the second and subsequent EISS kindergarten classes would be dramatic if two fewer children from each class were placed in special education.

VI. PROCESS EVALUATION

A. CURRICULUM DEVELOPMENT

During 1988-89, EISS completed three new sets of trainer materials, test translations, and provided advanced training in curriculum and instruction. A new manual was developed for trainers. The recommendations of the School Readiness Task Force were summarized for all EISS trainers and overhead projection materials provided to each of them. Similarly, presentation materials for trainers were also developed based on a survey of the literature regarding retention policies in the early grades. These materials relied heavily on the work of Smith and Shepard (Kappan, 1987, Educational Leadership, 1986) and the meta-analysis of retention research compiled by Holmes and Mathews (Review of Educational Research, 1984).

The two program developed screening instruments, the Language and Auditory Scale and the Integrated Motor Activity Scale, were translated into Vietnamese.

In addition, advanced curriculum training in the use of Effective Teaching Strategies was provided to the trainer candidates attending the 1989 Trainers Institute, June 25-30, 1989, in Laguna Beach. This training package, developed by Early Prevention of School Failure over the past several years and first published in 1988, contains advanced instruction for teachers in a wide range of instructional areas. A video tape provides classroom examples to accompany each instructional manual. Effective Teaching Strategies address: effective classroom environment; direct modality teaching; learning centers; listening centers; language experience; teaching talents, which extends the use of the EPSF talent folders for children with advanced abilities; units and themes; and parent involvement.

Recommendations

- Develop and refine the Skills Checklist for use as an observation tool. It should be studied as a possible alternative screening tool as well as a possible progress screening to be used at the end of first grade or the beginning of second.

- Continue to identify, and inform EISS schools regarding helpful curriculum packages. Those specially recommended by EISS include: Math Their Way, the High Scope Curriculum, the McCracken Reading Program, and the AIMS Math and Science Curriculum.

- Conduct reliability and validity studies of the Vietnamese translations of the LAS and MAS when sufficient population samples are available within EISS programs.

B. FRAMEWORK FOR GROWTH OF THE EISS NETWORK

A primary goal of EISS is to establish a strong network of quality programs, model demonstration sites, and professional trainers throughout California. This growing network shares information, particularly successes in providing a range of educational options to meet the needs of all students. While the emphasis has been on those at risk of school failure, teachers frequently remind us that the screening, management system and curriculum helps them serve all students more effectively. The process of building this network begins with the competitive grant process and is supported by technical assistance from EISS staff in all areas of implementation.

Grant Awards
EISS awards competitive grants yearly and assists schools through technical support and resources. Each elementary school principal and district administrator are notified in the fall of the new round of grant funds. During the winter of 1988-89, EISS held grant writing workshops in Burlingame, Sacramento, and Los Angeles to encourage potential applicants, to assist them in making a responsible decision to pursue the program, and to prepare a well written application. EISS has established good working relationships with the State Department of Education and is monitored by the High-Risk Youth Office. The Department has assisted EISS in publicizing grant opportunities to SB 65 schools (designated as having high dropout rates) and to the growing network of C-LERN schools. The following process outlines the system by which schools implement and disseminate the program. Site selection is described in greater detail in a later section of this report.

Adopter Schools
Adopter schools are the original EISS grant recipients. At the end of their adoption year, one or more staff members attend the Trainers Institute in order to become certified EISS trainers. These schools commit to a dissemination plan stated in their original grant application. Part of their commitment is to send a teacher or teachers to become certified trainers. Beyond that they also promise to make their trainer available during the following two years for inservice to other schools, both within district and to newly funded adopter schools.

Dissemination Schools
Schools can receive the EISS program through the original adopter school in their district. The dissemination site arranges for the district's in-house trainer to inservice staff, meeting all the requirements for a quality adoption. Various funding sources are available for dissemination sites and EISS assists in providing this information. This adoption-dissemination network ensures continuity of the program within the district and makes it possible for all interested schools in a district to adopt the program.

School districts may also adopt the program with other funds if they provide assurance that they will implement all six key elements of EISS. During 1988-89, districts entered the program with support from the SB 65 Program. Another district joined using a grant from the Bank of America.

Demonstration Site Network
Schools that have developed an exemplary adoption may apply for designation as a demonstration site. EISS maintains a network of schools that have documented implementation of key quality indicators tailored to meet the unique needs and resources of their schools. EISS refers new adopters and interested parties to 25 classrooms at 9 sites. Visitors are provided handouts supplied by EISS to guide their observations and are able to see the program working in a variety of successful settings.

Cooperative Referral System
The interest generated by the EISS program's activities has created more demand than funds and resources can accommodate. EISS has developed cooperative agreements with the parent program, Early Prevention of School Failure (EPSF) and the National Diffusion Network (NDN) to meet the needs of all interested schools.

- EISS and EPSF have produced an awareness packet that describes both programs in detail and resources for further information.

- EISS and EPSF jointly produced an Awareness videotape introducing the programs.
- Schools that do not receive an EISS grant are referred to the NDN for possible adoption of EPSF through other funding sources.
- The National Diffusion Network makes referrals to both programs.
- Interagency reporting procedures have been established to monitor adoptions and document the impact of EISS and EPSF in the State of California.

Statewide Network of Trainers

EISS trains and monitors a growing network of trainers throughout the state. Trainers are key leaders at the local level. Candidates can be teachers, support staff, or administrators, who are nominated from local EISS schools. The candidate must have at least one year of experience in classroom implementation. EISS currently has 93 trainers available statewide.

C. STAFF DEVELOPMENT

The key to successful establishment of the EISS program in schools throughout California is staff development. School district staff must receive expert training to use the program effectively. EISS staff development components are described in the following sections:

EISS Trainers Institute

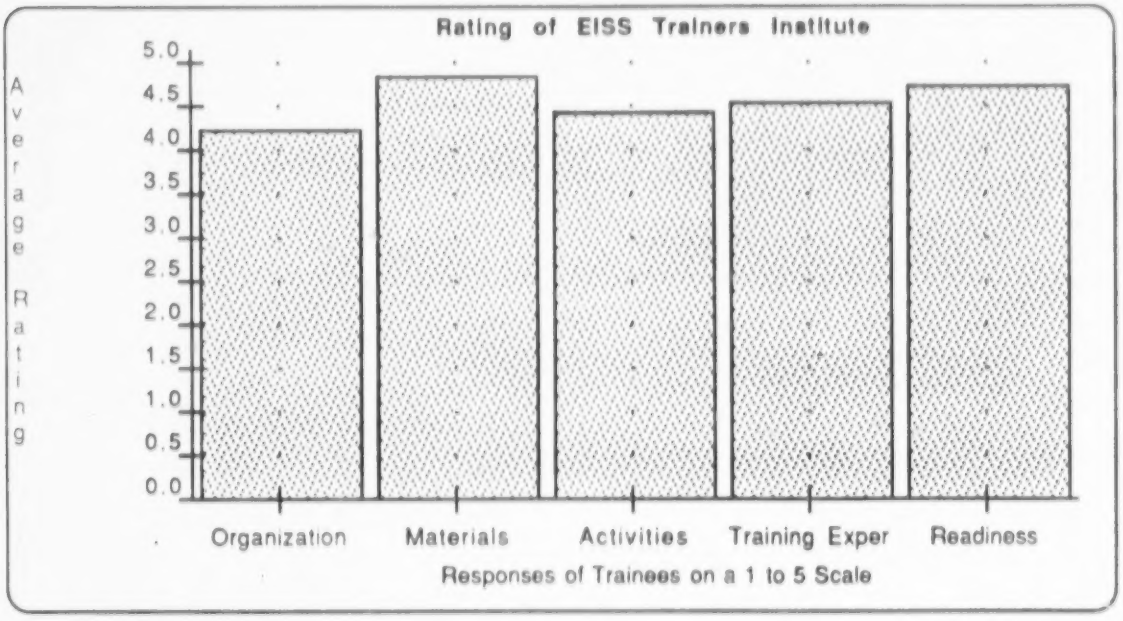
Advanced training is provided at a Trainers Institute for candidates to earn certification authorizing them to conduct trainings. The five days of training includes a day in which candidates train other teachers and are evaluated by EISS leaders. There are three levels of trainer certification: Statewide, Local District, and Awareness, based on this evaluation of the trainer's performance during the Institute.

The opportunity to interact with other professionals and share the training experience during the four Trainers Institutes has helped create a strong network for the sharing of resources. Table 54 and Figure 34 illustrate the positive trainer evaluations of the Trainers Institute held in June of 1989.

TABLE 54
Evaluation of the EISS Trainers Institute
June 25 - 30, 1989
1=Poor, 2=Fair, 3=Average, 4=Good, 5=Excellent

Overall Organization of the Conference		4.2
Overall Usefulness of Support Materials		4.8
Presentations and Training Activities		4.4
Benefit of Training/Evaluation Experience		4.5
...did the Institute increase your knowledge?	4.6	
...will this training be useful?	4.8	
...do you feel capable of using this knowledge?	4.6	
Self Evaluation (Readiness to Train Others)		4.7
Overall General Rating (Scale 1 - 10)		8.6

FIGURE 37



Inservice Training Materials

At Trainers Institute, candidates demonstrate proficiency in using all EISS screening and instructional materials. In addition, trainers become effective in the use of audio-visual and presentation techniques. Inservice and support materials produced by EISS assure the quality and consistency of inservice presentations statewide.

Packets are provided to trainers for each type of presentation. Awareness, Screening and Conferencing, and Implementation packets each include an inservice agenda, overhead projector

masters for presentations, and support materials. Awareness packets were strengthened in 1988-89 with the addition of information on the School Readiness Task Force recommendations and research studies on the topic of retentions in grade. A new Trainers Manual was provided to each EISS Trainer as well as the new Vietnamese translation of the screening instruments.

Adopter School Support

The EISS office also produces training materials to support the program in local schools. A twenty minute EISS Awareness videotape provides a comprehensive introduction to the EISS program. Trainers and local adopters use it to introduce a professional presentation of the program to parents, staff, and interested community members.

The Screening and Conferencing Handbook, written by EISS staff and trainers, provides detailed information for the screening and conferencing components of the EISS program. Used in conjunction with the EPSF training materials, all aspects of the program are documented with step by step directions. Trainers are trained in on techniques for using these resources in inservice presentations. Adopters can use the handbook as a ready reference in their classrooms.

An expanded trainers handbook was completed during the 1988-89 year to assist trainers in monitoring, evaluating, and promoting the EISS program at the local level. The handbook will be a reference and resource to assist in maintaining the program and also a guide to completing necessary data collection.

Results of evaluation studies were included as a part of the training of trainers. The issue of retention was addressed through reviews of research and of effective policy and practice.

D. SITE SELECTION PROCESS

1986-87 Grant Competition

Applications were mailed to each California district superintendent in April of 1986. Letters announcing the applications were mailed to each elementary principal a week later. One hundred eleven applications were received.

Twenty-one readers were gathered to evaluate the applications. Readers represented all geographic areas of the state and a wide variety of roles. Past and current affiliations of readers were surveyed in order to avoid possible conflicts of interest. Beyond this consideration, applications were numbered by arrival and readers assigned numbers in recruitment order so that applications could be randomly assigned.

Each application was read by three persons with each team reading more than a dozen grants. In order to achieve interteam reliability the applications were ranked on a scale using percentage of difference from the highest ranked score within a team. The twenty highest ranked applications were geographically and demographically representative of the state. The top ranked applicants were notified of grant awards in July, 1986.

1987-88 Grant Application Process

Second year applications were mailed to three groups: applicants from the previous year; schools participating in the SB65 program; and, all parties who had expressed an interest in EISS during the year. Approximately 650 application forms were sent and 34 were returned.

The reading and evaluation process was very similar to the previous year. Twenty-five applications were selected. Three sites were added during the summer of 1987. A field study site was established in an Orange County Child Development Center. Two schools in El Dorado County sent staff members as participants to the EISS training of trainers. A grant was made to the El Dorado County Office of Education to support the completion of training and implementation in those two schools.

1988-89 Grant Application Process

Announcement letters were sent to each elementary school principal, district and county superintendent. The program was also publicized through several conferences. Nearly 1300 requests for applications were honored. Thirty-eight complete applications were received.

The application process was refined to allow for multiple grant awards within large school districts. The application process was also refined to allow rural county offices of education to apply for a grant that would support a multi-school or multi-district adoption where a county provides direct services to schools.

1989-90 Grant Application Process

Announcement letters were again sent to each elementary school principal, district and county superintendent. The program was also publicized through several state conferences. Over 1,400 applications were mailed.

Three grant writing workshops were conducted across the state by EISS staff to assist districts in the planning and development of their grant application. Sample materials were developed and referrals were made to adopters and trainers in the applicant's geographic area. Overall, this increased the quality of the applications and subsequent adoptions.

Initially, 25 grants were awarded in April, 1989 using the established grant evaluation procedures. With a budget augmentation received in July, 1989, EISS funded an additional 20 grants for a total of 45 awards. This budget augmentation enabled EISS to double the number of new adopters for the 1989-90 school year.

1990-91 Grant Application Process

The cycle of announcement letters, publicity through presentations and the growing network of schools was repeated. The number of grant writing workshops was expanded to five. They were held in Oroville, Sacramento, Burlingame, Los Angeles, and Costa Mesa. One thousand applications were mailed to interested schools. EISS will award 45 to 50 new implementation grants for the 1990-91 year.

Recommendations

The announcement mailing to every elementary principal should be conducted annually in order to increase interest in all areas of the state. Interested parties may request the grant application packets.

The expanded number of grant writing workshops should be continued to assist interested districts and increase the number and quality of grant applications.

E. FIDELITY OF IMPLEMENTATION

Necessity of the Key Components

Success of the EISS program in a school requires full implementation of the six key components: team screening; team conferencing; educational planning; developmental instruction; parent involvement; and evaluation of student progress.

The importance of instruction in the program is confirmed by the achievement of EISS students. As was shown by the analysis of variables in Figure 34, total time spent in the program and hours of EISS instruction per week correlate more highly with student achievement than all other variables considered. Carefully planned instruction exerts a more powerful influence than a child's primary language, preschool experience, or socioeconomic status.

Successful implementation requires modifications in teacher behavior and school routines. The screening takes at least a full day for each average size class. Screening and conferencing require a degree of teamwork that may be unfamiliar to a staff. Developmentally appropriate instruction requires learning centers, daily small group instruction, and a curriculum which focuses on specific skills taught in a concrete to abstract sequence.

While each instructional aspect may already exist to varying degrees in adopting classrooms, significant changes are usually required by the teacher. In addition, parents must be informed of the program and successful implementation calls for more parent participation than may have been practiced in a school. Finally, evaluation of student achievement and project success require data reporting during the first project year to provide feedback on successes and areas that need refinement.

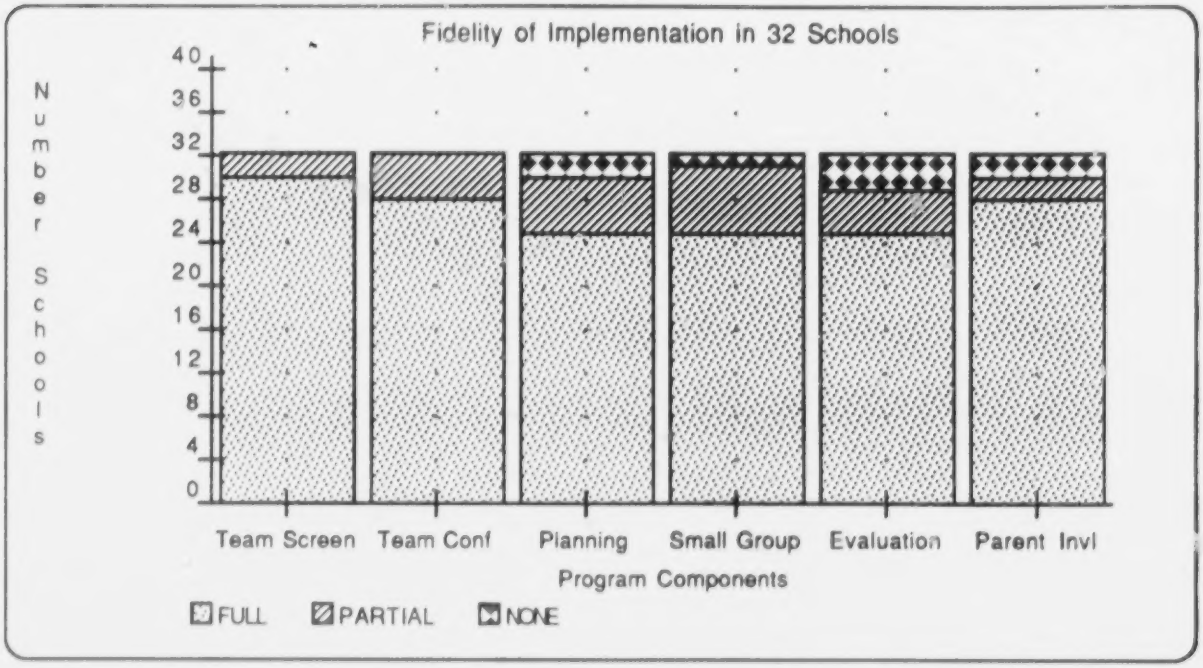
Evaluating the Key Components

Evaluation of the fidelity of implementation (the degree to which key components were incorporated into the existing educational program) was accomplished in two ways. Schools reported the implementation of key components as a part of data collection throughout the first project year. Each school was also visited by a member of the EISS staff and a Local Project Monitoring Form was completed and shared with the local school.

Local Project Monitoring Reports

Local project monitoring reports examined 10 factors directly related to the key components. Two factors address educational planning and four factors address aspects of developmental instruction. Each factor was assessed as fully implemented, partially implemented, or not implemented. The following figure displays the degree of implementation of each component from reports written for 32 program schools.

FIGURE 38



Analysis

While the quality of implementation is high, it is important to note that visits to a majority of the schools took place during the first half of the program year when it could not be expected that all components would be fully implemented. It must also be noted that these evaluations include quality judgements. Evidence that the screening team was not fully involved in team conferencing, even though all student profiles were complete, may have resulted in a "partially implemented" evaluation.

Further, the purpose of this monitoring report is to give formative feedback to a school rather than to assign numeric scores. The percentages of completion are a relative measure of progress sampled at the early stages of a series of important changes.

F. PARENT PARTICIPATION AND PERCEPTIONS OF THE PROGRAM

Parent Participation

Each school was asked to distribute parent surveys and return the results to the EISS office. Evaluation surveys were received from 558 parents. Participation questions were also included in the survey. The questions are re-worded as statements in Table 55 with the percentage of yes responses preceding each item.

TABLE 55
PARENT PARTICIPATION

% YES	Participation Statements
47%	Parents reporting that they had participated in a parent orientation meeting.
64%	Received ideas they could use at home.
80%	Had a conference regarding EISS screening.
48%	Returned a parent observation form.
49%	Received an end of year progress report on their child's participation in EISS.

TABLE 56
PARENT PERCEPTIONS

% Agree or Strongly Agree	Statement
59%	EISS provided valuable ideas to use at home.
60%	EISS effectively identified my child's strengths and weaknesses and the information was clearly communicated to me.
62%	I was pleased with my child's participation in EISS.
60%	The suggestions for home activities were useful.

Analysis

Parent evaluation surveys were received from 558 parents, an increase of nearly 20% over the previous year responses. " Yes" responses decreased significantly over the previous year. "No" or "disagree" responses did not increase significantly. The negative change was in the increased number of "no opinion" responses. Given the increased number of surveys returned, these percentages may reflect parent perceptions and participation more accurately than the previous survey. The percentage of parents who recall an end of year progress report fluctuated from 38% in 1986-87 to 73% in 1987-88 to 49% in 1988-89. This relatively low degree of parent participation is cause for concern.

VII. COMPARISONS OF 1986-87 THROUGH 1988-89

A. DEMOGRAPHIC COMPARISON BETWEEN 1986-87, 1987-88, AND 1988-89

During the 1986-87 project year, a representative sample of 469 students was analyzed to assess project impact. During the 1987-88 school year, a representative sample of 944 students was analyzed. During 1988-89, 984 students were analyzed. The following Tables and Figures provide the characteristics of the testing sample for the first three project years.

TABLE 57
PRIMARY LANGUAGE

	1987		1988		1989	
Primary Language	Frequency	Percent	Frequency	Percent	Frequency	Percent
English	370	83.0	333	50.5	559	58.3
Spanish	64	14.3	268	40.7	317	33.1
Vietnamese	1	.2	11	1.7	11	1.1
Chinese	1	.2	4	.6	4	.4
Laotian	6	1.3	.9	1.4	8	.8
Filipino	1	.2	13	2.0	4	.4
Other	3	.6	21	3.2	55	5.7

FIGURE 39

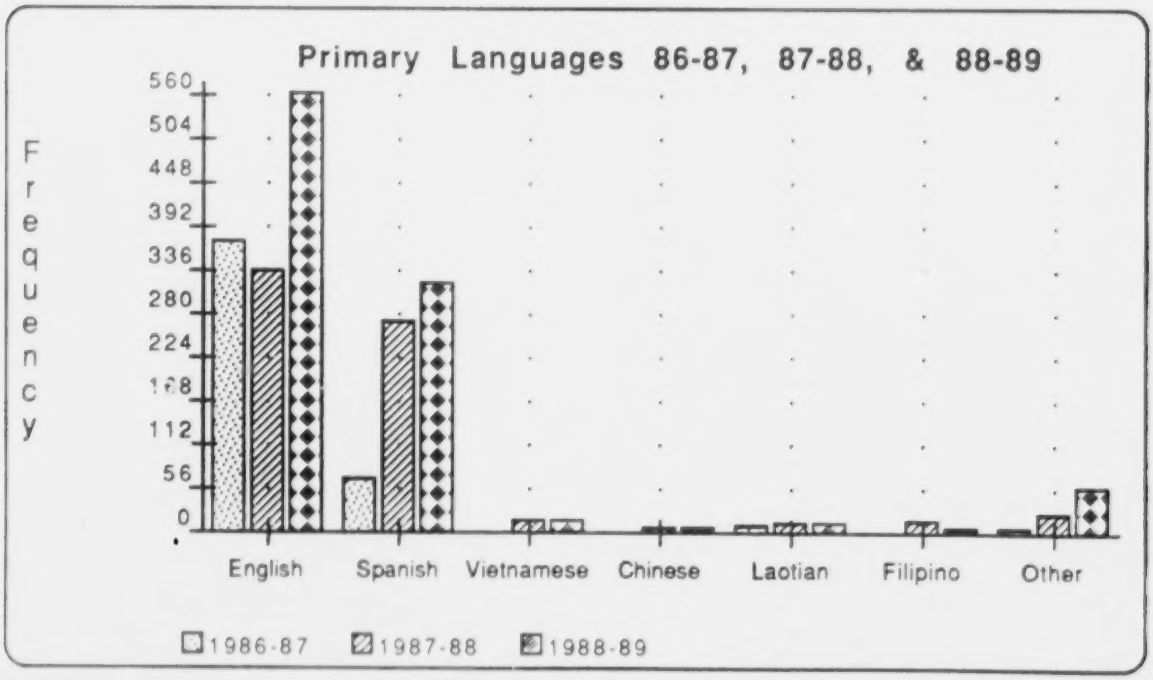


TABLE 58
MIGRANT PROGRAM

Migrant Program	1987 Frequency	1987 Percent	1988 Frequency	1988 Percent	1989 Frequency	1989 Percent
In Migrant Program	5	1.5	31	4.9	36	3.9
Not in Migrant Program	323	98.5	605	95.1	885	96.0

FIGURE 40

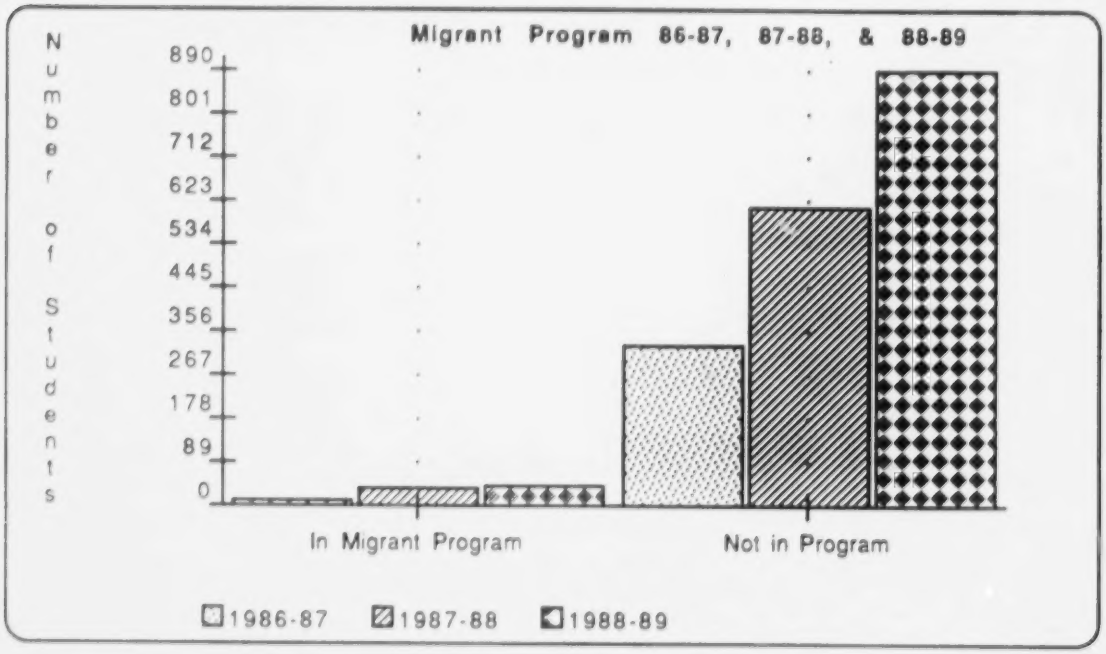


TABLE 59
CHAPTER I

Chapter I	1987 Frequency	1987 Percent	1988 Frequency	1988 Percent	1989 Frequency	1989 Percent
Yes	255	64.4	295	56.1	288	31.8
No	141	35.6	231	43.9	617	68.1

FIGURE 41

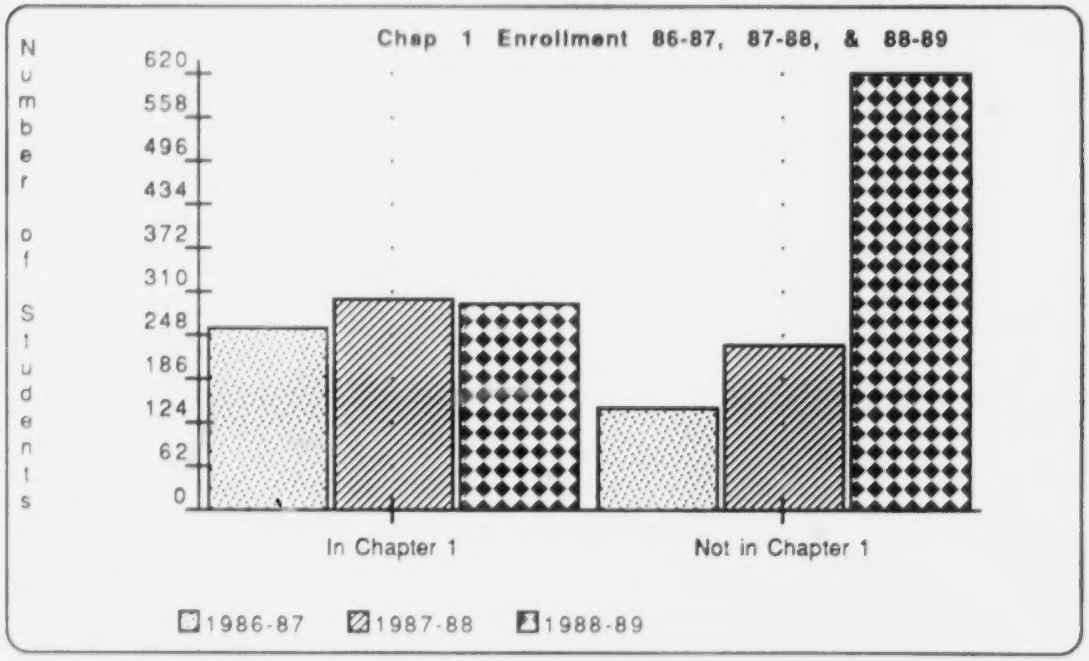


TABLE 60
LIMITED ENGLISH PROFICIENCY

LEP	1987 Frequency	1987 Percent	1988 Frequency	1988 Percent	1989 Frequency	1989 Percent
Identified LEP	45	13.3	277	46.2	369	39.3
Not Identified LEP	294	86.7	336	53.8	552	58.8

FIGURE 42

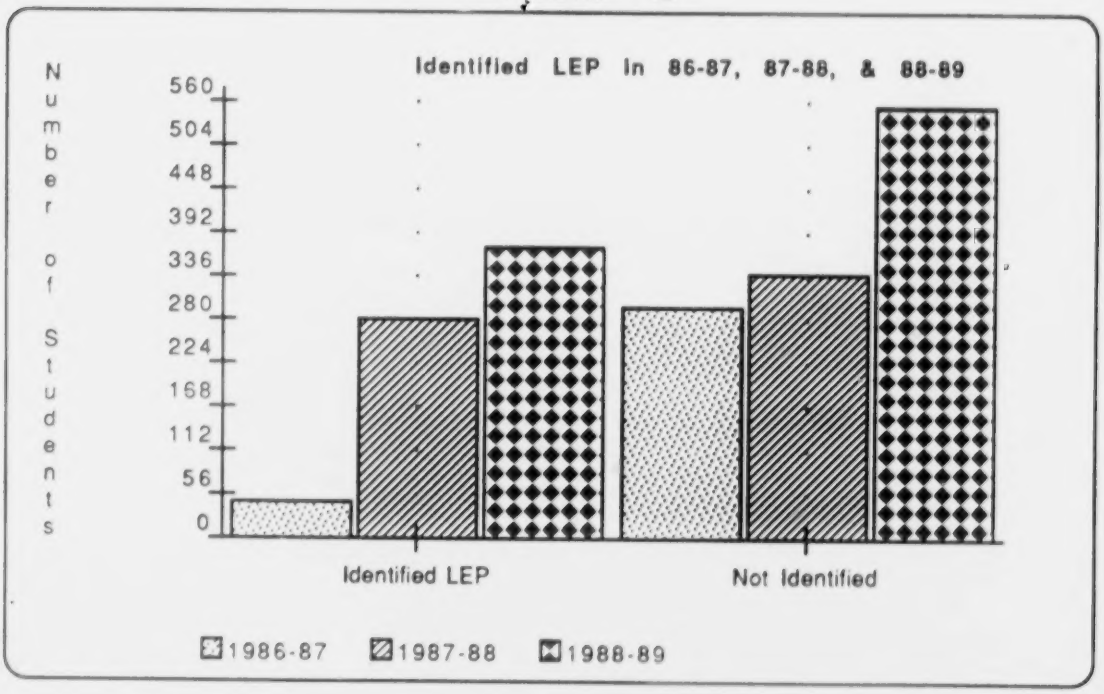


TABLE 61
ETHNIC BACKGROUND

Ethnic Background	1987 Frequency	1987 Percent	1988 Frequency	1988 Percent	1989 Frequency	1989 Percent
Amer. Indian or Alaskan Indian	14	3.4	6	.9	24	2.6
Asian or Pacific Islander	20	4.6	42	6.4	74	7.9
Filipino	2	.5	19	2.9	10	1.1
Hispanic	110	25.3	352	53.6	379	40.4
Black-Not Hispanic Origin	31	7.1	31	4.7	59	6.3
White-Not Hispanic Origin	256	58.9	205	31.2	386	41.2
Unknown	1	.2	2	.3	5	.5

FIGURE 43

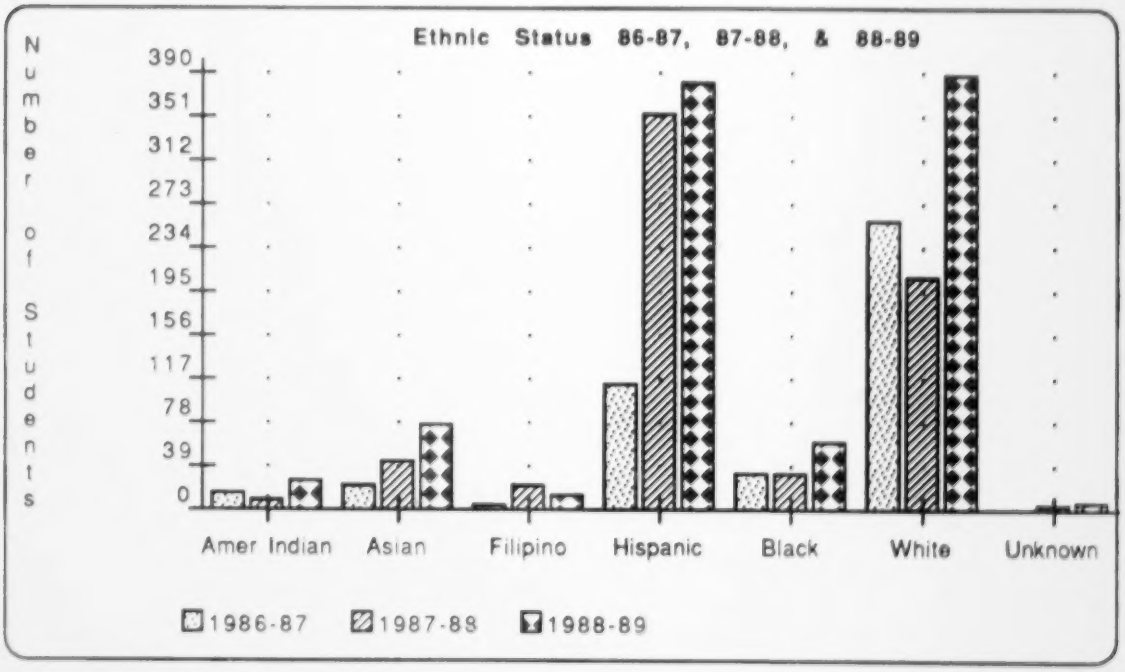
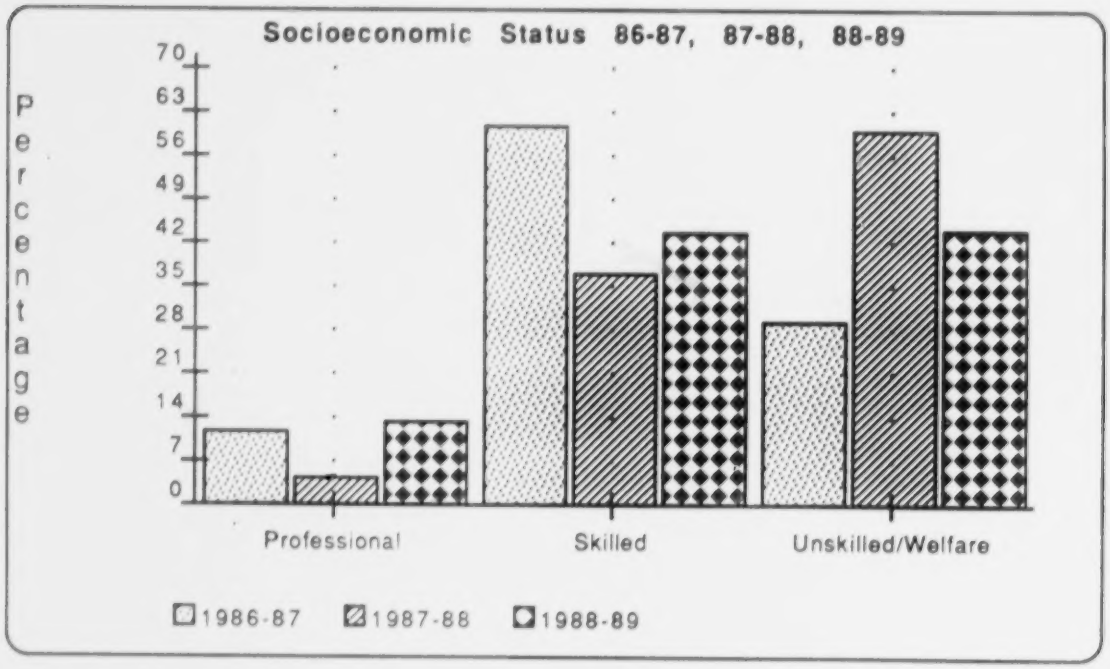


TABLE 62
SOCIOECONOMIC STATUS

Socioeconomic Level	1987 Frequency	1987 Percent	1988 Frequency	1988 Percent	1989 Frequency	1989 Percent
Unskilled/Welfare Unknown	129	28.7	368	59.4	403	43.7
Skilled/Semi-Skilled	271	60.2	226	36.5	399	43.2
Professional/Executives/ Semi-Professional	50	11.1	25	4.0	120	13.0

FIGURE 44



Summary of Student Population Profile - Three Year Comparison
The sample of students showed major differences on the following characteristics:

	Percentage of Sample		
	1986-87	1987-88	1988-89
Major Differences			
Primary language other than English	17.0%	49.5%	41.7%
Identified as LEP	13.3%	46.2%	39.3%
Ethnic background other than White not of Hispanic origin	41.0%	68.5%	58.8%
Were identified for Migrant Education	1.5%	4.9%	3.9%
Identified as unskilled/welfare	28.7%	59.4%	43.7%

The 1987-88 sample showed higher percentages of non-English primary language LEP students, ethnic diversity and unskilled socioeconomic groupings. The differences were larger between the 1987-88 and 1986-87 samples and smaller for 1988-89.

B. STUDENT ACHIEVEMENT

Over the three years of the project, at risk students have shown significant gains in the areas of language development, visual motor integration and mathematics concepts. All subgroups showed increases in percentile rank scores. Typically, at risk students should show a decline in percentile rank scores. The EISS Project has demonstrated over a three year period a reversal of the usual decline in performance of at risk students. Also, the gap in performance between at risk students and the normative population has decreased each year.

The following table and figures illustrate the achievement of five major subgroups: 1986-87 at risk students; Spanish and English speaking students; 1987-88 students; Spanish and English speaking 1988-89 students; and 1988-89 Other LEP students.

TABLE 63
THREE YEAR SCREENING RESULTS
NATIONALLY STANDARDIZED INSTRUMENTS

1986-87 English Speaking

Instrument	N	Pre	Post	Percentile Gain
PPVT	230	5	19	+14
VMI	232	12	31	+9
TOBE-Language	54	17	30	+13
TOBE-Math	78	22	28	+6

TABLE 63 Continued

1987-88	English Speaking				
	Instrument				
	PPVT	230	27	39	+12
	VMI	224	32	78	+46
	TOBE-Language	96	37	53	+16
	TOBE-Math	97	36	44	+8
1987-88	Spanish Speaking				
	Instrument				
	PPVT	119	14	47	+33
	VMI	118	53	65	+12
	TOBE-Language	56	19	44	+25
	TOBE-Math	61	25	38	+13
1988-89	English Speaking				
	Instrument				
	PPVT	263	16	42	+26
	VMI	256	18	44	+26
	TOBE-Language	75	37	53	+16
	TOBE-Math	78	36	44	+8
1988-89	Spanish Speaking				
	Instrument				
	PPVT	234	10	27	+17
	VMI	226	18	44	+26
	TOBE-Language	86	11	13	+2
	TOBE-Math	79	15	28	+13
1988-89	Other LEP				
	Instrument				
	PPVT				
	VMI	62	33	65	+18
	TOBE-Language	32	11	22	+11
	TOBE-Math	30	20	32	+12

FIGURE 45

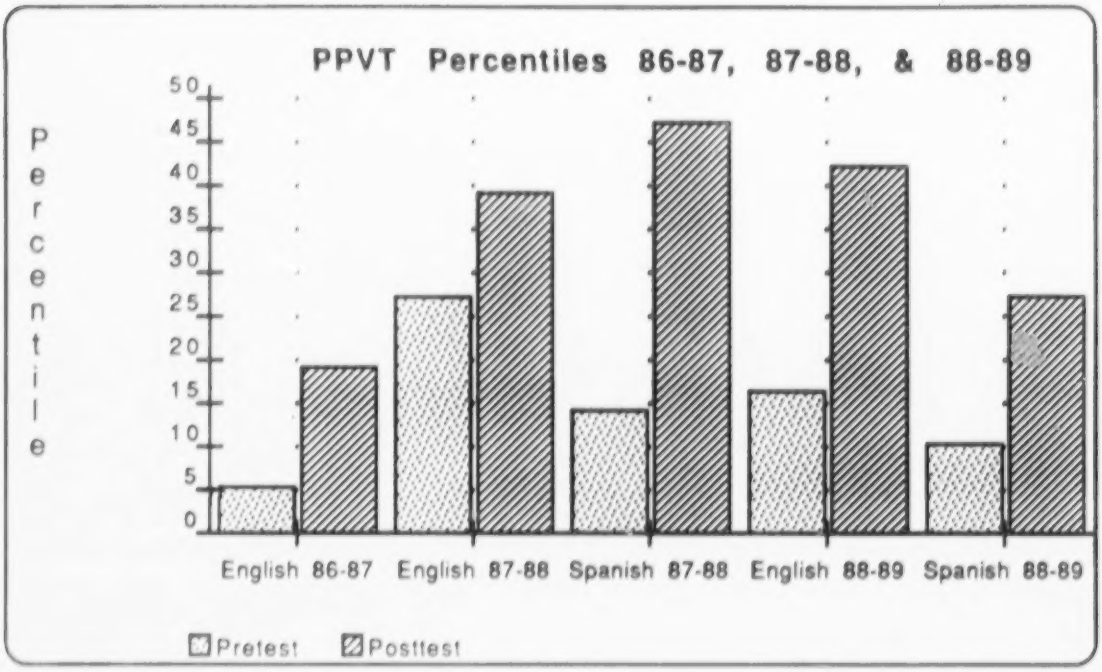


FIGURE 46

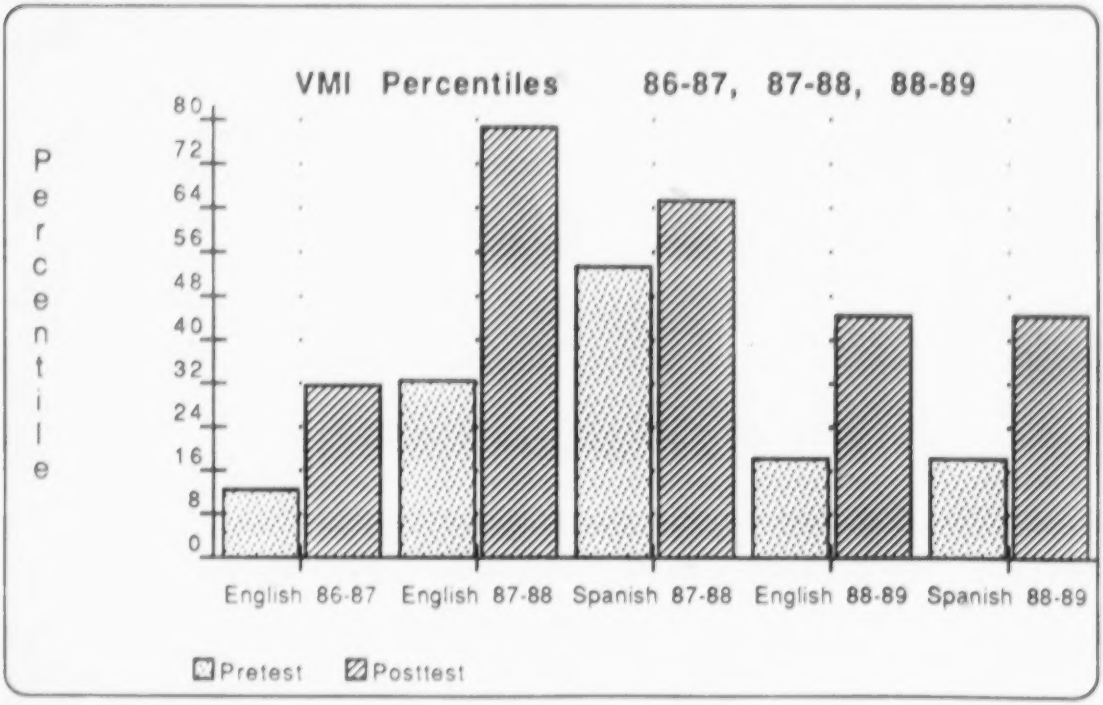


FIGURE 47

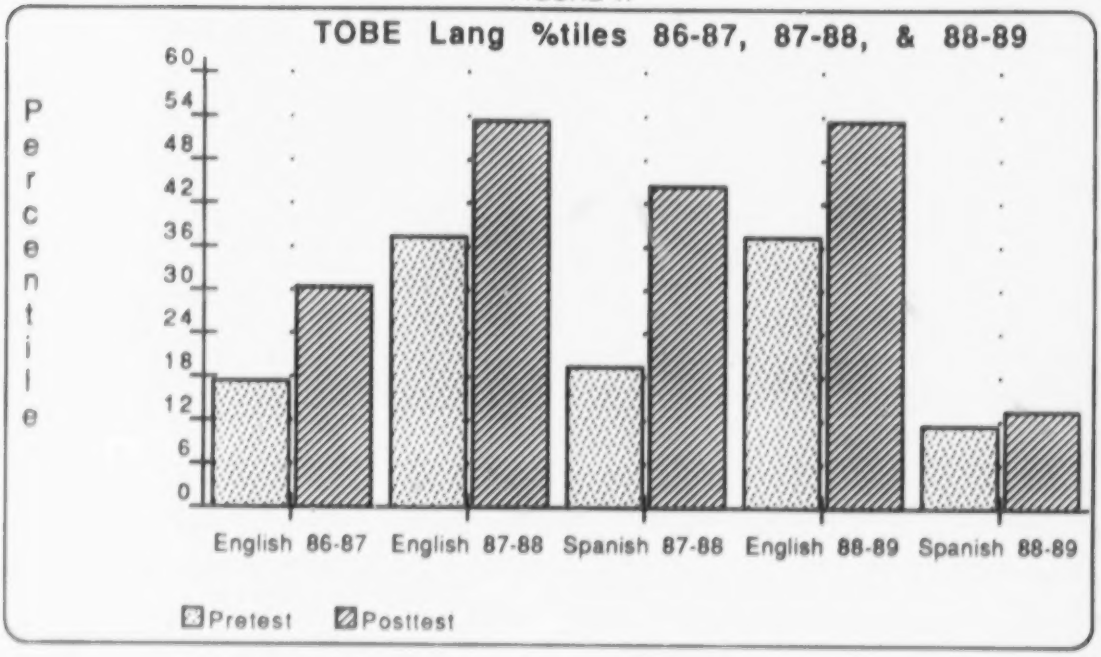
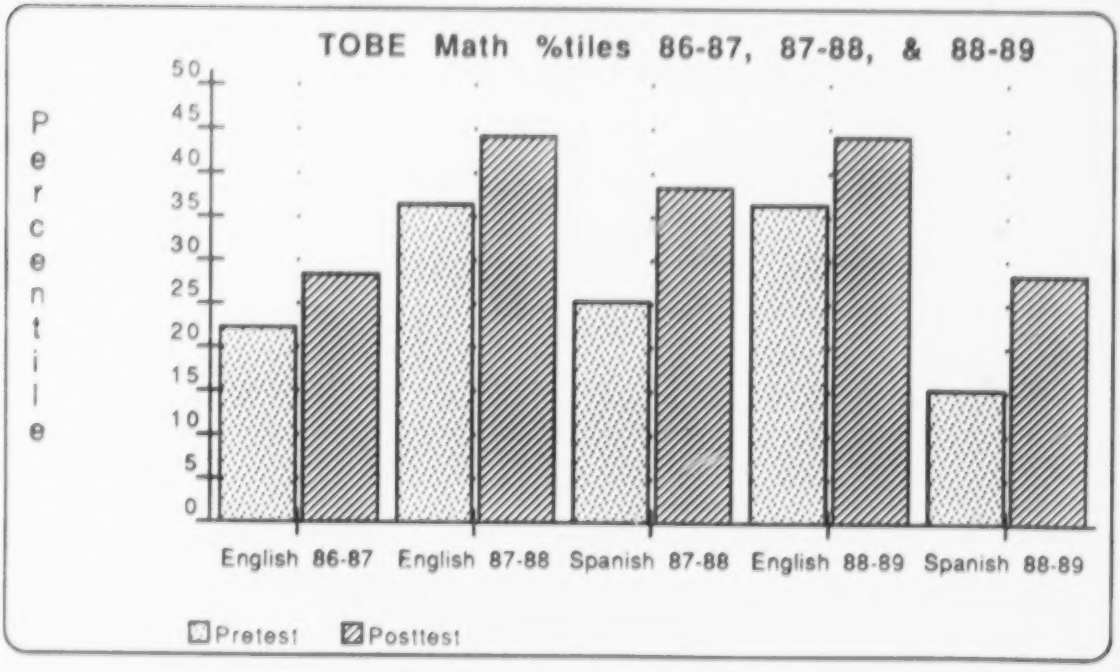


FIGURE 48



Analysis

All subgroups showed increases in percentile rank scores. Typically, at risk students show a decline in percentile rank scores when confronted with school tasks. The EISS Project has demonstrated a reversal over a three year period of this usual decline in performance.

The smallest gain shown on nationally standardized screening instruments was a two percentile gain made by 1988-89 Spanish speaking kindergarteners on the language subtest of the TOBE. This same group made gains of from 13 to 26 percentiles on the other instruments. For all groups over the three years on these instruments, the gains range from 2 to 46 percentiles over the kindergarten months. The median gain was 13 percentile ranks. Over the first three years of EISS, the achievement of 2,397 students has been studied. Each group of at risk children have made significant progress in closing the gap between themselves and the average student population.

Three Year Comparison of Program Variables

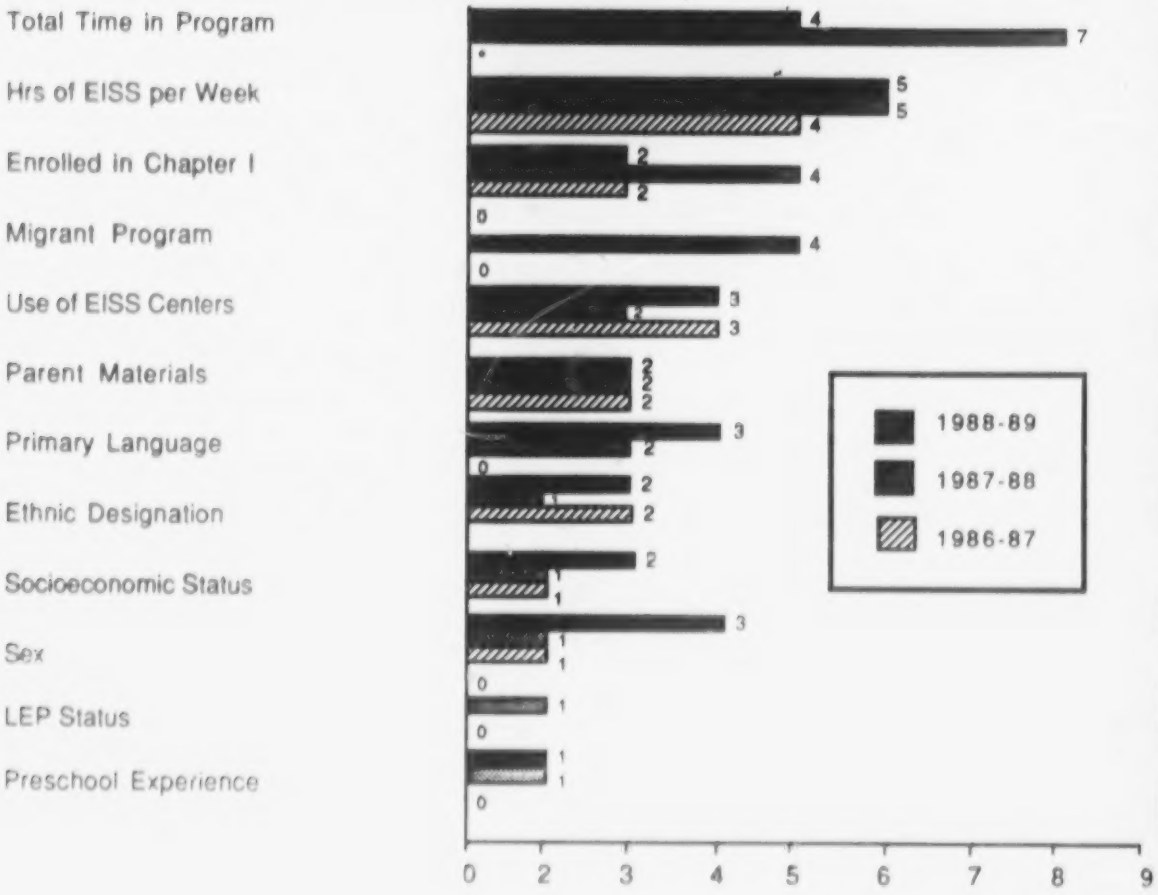
During each year, multiple analyses of variance were performed to determine the interaction of independent variables (Primary Language, Chapter I, etc.) and student achievement measures. The following Table and Figure present a summary of that information.

TABLE 52
INTERACTION OF PROGRAM AND POPULATION VARIABLES
AND OUTCOME MEASURES
NUMBERS OF SIGNIFICANT INTERACTIONS

	Outcome Measure - Post-test		
Variable	1986-87	1987-88	1988-89
Sex	1	1	3
Socioeconomic Status	1	1	2
Primary Language	0	2	3
Migrant Program	0	3	0
Birth Order	0	0	0
Child Care	1	0	2
Chapter I	2	4	2
LEP Status	0	1	0
Ethnic Desig.	2	1	2
Preschool Exp.	0	1	1
Hours of EISS Per Week	4	5	5
Health Concerns (POF)	0	0	0
Parent Materials	2	2	2
Visual Concerns	1	0	1
Motor Concerns (POF)	0	0	0
EISS Centers	3	2	3
Time in Program	N/A	7	4
Hearing Assess. (POF)	1	0	1
Hearing Concerns (POF)	1	0	1
Visual Assess. (POF)	1	0	0

FIGURE 49

Influence of EISS Variables Over Two Years



Frequency of Significant Interactions on Posttest Measures

Analysis

Over the three years of the project, the program variables of Length of Time in the program, Hours of EISS Instruction Per Week, Parent Materials, and EISS Centers showed the greatest number of significant interactions on outcome measures. The population characteristic variables of Chapter I participation produced the most significant interaction on outcome measures for non-program variables. These analyses seem to indicate that well informed targeted instruction for a small portion of each school day produces student gains which can overcome the wide variety of preparation typical of California kindergarteners.

EVALUATION PLAN

The evaluation plan present the components, process, and reporting necessary to evaluate the EISS (Early Intervention for School Success) Program. Plans for both formative and summative evaluation are presented.

Evaluation Questions

- How successful has the EISS Program been in providing "at risk" students, ages 4 through 7, an appropriate intervention plan to ensure their school success?
- How effective has the EISS training been of staff in screening, identifying, and program implementation?
- Have the key components of the EISS Program been implemented?
- Which EISS project components, interventions, setting characteristics, and student characteristics had the greatest impact on student learning?
- Over a five-year time span, what factors (instructional experiences, student background, setting characteristics) had the greatest effect in predicting school success?

EVALUATION DESIGN TO MEASURE PROJECT IMPACT

The project proposed to use a Norm-Referenced Design as the comparison procedure. Comparison analysis as designed in the norm-referenced model is based on the equal percentile assumption. Under this model, gains attributed to the treatment are defined as the difference between the treatment group's performance on a post-treatment test, and what performance on the same test would have been had the group not received the treatment. Normal expectancy (expected no-treatment performance) for a group not receiving any special treatment fails relatively within the same position (using percentile rankings) at pre- and posttest times when compared to the national sample norms on which a standardized instrument was designed. Consequently, the performance of the EISS participants will be compared to the results of the norming sample used in the development of the standardized test. In summary, the project's impact is the observed post-treatment performance minus the expected no-treatment performance. The observed post-treatment performance is always the mean or median post-test score of the treatment group.

Sampling Procedures

A stratified representative sample of adopting sites ("longitudinal study schools") will be selected to collect project impact data using the Tests of Basic Experience (TOBE), the Peabody Picture Vocabulary Test (PPVT), the Developmental Test of Visual Motor Integration (VMI), and project tests. Results will be reported on all students tested.

THE APPROPRIATENESS OF THE EVALUATION DESIGN

Flanagan's 1951 suggestion that a "year's growth" afforded a defensible basic unit for assessing relative academic progress was almost certainly the precursor of early Title I evaluations where greater than month-for-growth became the hallmark of successful projects. The logic that disadvantaged children who gained more than a grade-equivalent month for each month of program participation were catching up to the national norm seemed impeccable.

A review by Linn (1982) concluded that the design has an inherent positive bias (attributable to statistical regression) of "only about 1 or possible 2 NCEs" when used with an annual testing cycle. An empirical study by Tallmadge (1982) found the bias to be "on the order of 1 NCE when typical Title I groups are examined."

Otherwise the model was found to be technically sound. The model can be subject to stakeholder bias, however, under conditions when testing and/or scoring are conducted by parties who are "interested" in the evaluation showing positive results.

Tallmadge found that the design was less subject to random error than true experiments because students served saw their own controls and that, even with its bias, it produced more accurate treatment-effect estimates than the Posttest-Only Control Group Design (in six out of six large-scale tests) and the Pretest-Posttest Control Group Design with "covariance adjustment" (in four out of six large-scale tests). These investigations, however, all employed high quality instruments that had been carefully scaled and normed. The design would certainly not work as well with tests that were poorly standardized. The tests used in the EISS study are well-standardized tests.

The norm-referenced design derives its no-treatment expectation from the "equipercentile assumption" which specified that groups of students will maintain their status relative to a locally or nationally representative norm group from pre- to posttest in the absence of a special instructional intervention. Tallmadge (1982) found that this assumption was tenable for large heterogeneous groups of low-achieveing students; for mid-size groups of low-achieving students in low socioeconomic status schools in small, medium, and large school districts; for mid-size groups of low-achieving students in low socioeconomic status schools in rural, town, small city, city, and large city settings; and, for project-size groups (grade within school) of low-achieving students across all of the above settings.

The Program Effectiveness Panel (PEP) in the U.S. Department of Education has responsibility for approval of "exemplary projects" based on evaluation results. In a publication of the PEP Questions and Answers (1988), they state:

> Is it always necessary to have a control of comparison group?
>
> The need for comparison groups depends on the evaluation design but there is always the need for a comparison standard by which the PEP can judge the effectiveness of the project. The standard may or may not involve a specially constituted group. One example in which a separate group is not necessary is the norm-referenced design in which the comparison is provided by the norming group from a standardized achievement test.

GOALS FOR LONGITUDINAL STUDY

Selected representative schools are participating in a longitudinal study to determine the impact of the project over a four-year period of time. The goals of this longitudinal study are as follows:

- To determine whether the EISS Program can reduce the cost of remedial education. Does the EISS Program significantly impact rates of retention, referral to special education, placement in special education, and length of placement in special education?

- To determine the impact of the EISS Program on "at risk" student's learning over four years. Does the EISS early intervention program significantly improve student learning for at risk students? Do at risk students make gains similar to normal students?

- To determine whether the EISS Program continues to operate and expand after initial seed funding stops. Do adopting schools continue to provide the program and does the program expand to other, non-funded sites?

INITIATION OF QUASI-EXPERIMENTAL NON-EQUIVALENT COMPARISON GROUP DESIGN

During the 1989-90 school year, the EISS Project has initiated an additional component to its longitudinal study using a non-equivalent comparison group design.

The most common form of the non-equivalent comparison group design (and the only way that will be discussed here) is the Pretest-Posttest Two-Group Design. Both treatment and comparison groups are pre-existing intact groups, and the most important consideration when implementing the design is the similarity of the groups. Either "regular" or some modified form of covariance analysis incorporating pretest scores as a covariate is usually employed to adjust for whatever between-group differences existed when the evaluation began.

The EISS Project will contract with local adopting school districts to identify local non-adopting schools to serve as comparison groups. These selected comparison schools will be matched on socioeconomic factors, ethnic composition, and achievement history. The districts will administer the screening and testing battery to these students, pre and post. These results will be compared to the results of the students receiving the EISS intervention.

Evaluation Instruments

Tests of Basic Experience (TOBE)

Readiness skills acquisition will be measured using the Tests of Basic Experience (TOBE) (CTB/McGraw Hill, Inc. 1970). The TOBE is a set of group tests of the "richness of conceptual background" of children in preschool, kindergarten, or first grade.

Each of the two levels has four separate tests -- mathematics, language, science, and social studies, which includes items from the other four. Each test contains 28 items, and requires approximately 25 minutes to administer. Test items have been selected on a combination of norm-referenced and criterion-referenced criteria: Items were selected to achieve a balance which avoided very easy and very difficult items (norm-referenced) but some items which appeared to be relatively easy or relatively difficult were retained due to the disirability of a measure of the concept inherent in the items (criterion-referenced). In each item, the examiner gives a verbal direction and the child marks one out of four pictures in his test booklet.

The project proposes to administer the test on a pre-test (August) to post-test (June) basis to all children in the project using the language in which each is more proficient.

Peabody Picture Vocabulary Test - (PPVT)

This is a standardized norm-referenced test of receptive vocabulary published by the American Guidance Services, Inc. Students are requested to respond to a word by pointing to one of four pictures. This test has excellent reliability and validity data.

Developmental Test of Visual Motor Integration - (VMI)

The VMI consists of 24 geometric forms that are to be copies in a test booklet. These geometric forms are arranged in order of increasing difficulty, and an individual's score is calculated as the number of forms that have been copied successfully prior to three consecutive failures. A separate age equivalent norm for each sex is also provided for each of the 24 items on the test. Educational assessment is the stated purpose for which the test has been designed, with particular emphasis placed on the preschool group.

Early Intervention for School Success (EISS) - Language and Auditory Scale

This language screening is based on developmental scales of language processing designed to screen language deficits. This instrument has undergone reliability and validity studies as a result of this project in both English and Spanish. The results are available on request.

EISS Motor Activity Scale

This motor assessment sreening is designed to identify children with delays in psychomotor development. This scale has also undergone reliability and validity studies as a result of this project.

PROCESS EVALUATION

The primary areas of process evaluation are: instructional component; staff development; and, parent education and community involvement. The process evaluation is designed to improve project operation.

Basic instruction and related activities will be monitored and evaluated by the Project Director, the External Evaluator, and teachers. Discrepancies between what was planned and what actually happened will be noted. The results will be used to make necessary

changes to improve program operation. The collection of process data will be an important part of the project. Process evaluation will include the following: needs assessment data to determine the entry level of students and the development of education plans; and training programs will be monitored and evaluated to determine effectiveness and appropriateness to Limited English Proficient (LEP) students. Materials which do not meet specific criteria will be modified.

PROCESS OBJECTIVES

Staff Development, Teaching Staff

Staff will be trained at each site to use the EISS model.

Evaluation Procedures

Local Project Director will evaluate the application of new teacher competencies based on the EISS developmental model using a "competencies checklist" in the areas of:

- Presentation and use of materials that are developmentally appropriate.
- Instruction and classroom management which takes into account student functioning in language, auditory, visual, fine motor, and gross motor skills.

Staff Development, Screening Staff

Staff, including support staff, such as School Psychologists, Speech and Language Specialists, Counselors, Chapter I, Migrant, Resource personnel, etc., will be trained to provide and will provide pre/post screening to EISS students.

Evaluation Procedures

Local Project Director will observe screening and review with a member of the EISS staff. Observations will focus on:

- Demonstration of appropriate test administration procedure.
- Establishing rapport with students to elicit optimum performance.
- Recording results appropriately on screening scales.
- Interpreting results appropriately on profiles and plans programs for students.
- Communicating information in an appropriate manner to parents.

Each teacher will also be asked to report on the quality and quantity of training received.

Parent Participation

Parents of students will have been provided with prescriptive materials/methods to assist students in diagnosed areas of pre-academic instruction at home.

Evaluation Procedures

- Completion of parent survey on student needs, pre/post, and perceptions of the program.
- Log of trainings and materials provided to parents.

Differential Analysis

Another major thrust of evaluation is a differential analysis to determine which program components has the greatest impact on student learning. Data will be analyzed based on the following categories:

- Staff Development Characteristics
- Instructional Strategies
- Degree of Implementation
- Teacher Characteristics
- Setting Variables
- Student Characteristics

Evaluation Procedures

Variables under each of these categories will be correlated with outcome measures to determine which is most positively correlated. In addition, appropriate regression statistics will be run.

Design Outline

The following chart shows the evaluation procedures being used to determine project impact. The evaluation questions (project objectives) are displayed on the first chart. The second chart illustrates that the data collection and data analysis procedures are consistent with the scope of the objectives.

EVALUATION QUESTIONS AND DESIGNS

COMPONENT	EVALUATION QUESTION	DESIGN	VARIABLE
1. Language Arts and Math Readiness	How much did students in the project progress in Language Arts and readiness skills in Math?	One-group pretest/post-test norm-referenced.	Language Arts and Math readiness. Defined by TOBE score on language and math. Sample: All student participants who took both pre and post-tests and who were present 90% of the time.
2. Receptive Vocabulary	How much did the project student's progress in the development of receptive vocabulary?	One-group pretest/post-test norm-referenced.	PPVT measure of receptive vocabulary comprehension Sample: All project participants who took the pretest and the post-test and who were present at least 90% of the time.
3. EISS Language and Auditory Scale	How has each project student's language processing skills changed as a result of the project?	One-group pretest/post-test.	Language processing scores of the EISS Language screening. Sample: All participants who took both the pretest and post-test and who were present at least 90% of the time.
4. Psychomotor Development	How has each project student's psychomotor development	One-group pretest/post-test.	Scores on the EISS Motor Activity Scale. Sample: All participants who took both pretest and post-test and who were present at least 90% of the time.
5. Rates of Retention and Referral	What is the rate of retention in in indergarten and referral to special education?	One-group time series design.	Ratio of retention and referral per ADA enrollment in Kindergarten.

EVALUATION PROCEDURES TO MEASURE PROJECT IMPACT

COMPONENT	DATA COLLECTION PROCEDURES	DATA ANALYSIS PROCEDURE	DATA PRESENTATION MODE
1. Language Arts and Math Readiness	Pretest and post-test scores on the TOBE converted to percentiles. Teachers code data specified above on sheets provided for pretest and post-test by evaluator.	TOBE: Raw scores for each individual will be converted to scale scores and then to percentile ranks (PR). Pretest PR scores will be subtracted from post-test PR scores. The difference of 5 PRs will be considered an educationally significant gain. TOBE: PR will be used to compute median, standard deviation, and range. Appropriate inferential statistics test will determine statistical significance. Added to this criteria will be the judgement of the staff as to "educational significance." The project objective requires an analysis of student progress in relation to the results of the Test of Basic Experience (TOBE) language arts/ math test for the norming group.	Medians, standard deviation range, and percentile rank will be presented in tabular form. Frequencies will be presented as frequency polygons.
2. Receptive Vocabulary	pre-test and post-test on PPVT. Teachers code data specified above on special coding sheets provided by the evaluator.	PPVT pre/post raw score means will be converted to developmental age scores, percentile ranks (PR), and NCE scores. Appropriate inferential statistics test will be used to determine statistical significance. Added to this criteria will be the judgement of the staff as to "educational significance."	Medians, standard deviation range, and percentile rank will be presented in tabular form. Frequencies will be presented as frequency polygons.
3. EISS Language Screening	Pretest and post-test scores on the EISS Language Screening. Teachers code data specified above on special coding sheets provided by the evaluator.	Pretest scores will be subtracted from post-test scores. Positively-valued difference scores will be taken as evidence that language skills remained stable or grew increasingly positive.	Data will be presented in the form of frequency distributions and frequency polygons.

EVALUATION PROCEDURES (continued)

COMPONENT	DATA COLLECTION PROCEDURES	DATA ANALYSIS PROCEDURE	DATA PRESENTATION MODE
4. Psychomotor Development	Pre-test and Post-test scores on the EISS Motor Activity Scale and the VMI. Teachers code data specified on coding sheets.	Pre-test raw scores will be subtracted from Post-test raw scores. Positively-valued difference scores will indicate an improvement in psychomotor development	Data will be presented in the form of frequency distribution of raw scores pre/post.
5. Retention and Referral	Record retentions for 1984-85, 1985-86, 1986-87, 1987-88, and 1988-89 school years.	Rates of retention will be analyzed to determine changes over the years. The 1984-85 year will be viewed as a baseline year of data collection.	Data will be presented both for retention and Special Education referral rates as a percentage of population.

(Please place the following form on your school letterhead)

EARLY INTERVENTION FOR SCHOOL SUCCESS

PARENT OBSERVATION FORM

Name of Child_____Birthdate_____

Parent's Name_____

Address_____

(Father's)_____

(Mother's)_____

Child's family includes:_____

Brothers (names and ages)_____

Sisters (names and ages)_____

Please answer the questions on this form in the best way that you can. You will be able to answer some quite easily and you will have difficulty in making a decision on others.

Your answers on this form will help the school staff and will involve you in deciding with the teacher what kind of educational program is best suited for your child.

This questionnaire is confidential and your responses will be shared only with professional personnel and only if the information learned will help in planning an educational program for your child.

DEVELOPED BY EARLY PREVENTION OF SCHOOL FAILURE

I. **General Health History**

Please check any health concern that you or your doctor has noticed.

___Asthma
___Indigestion
___Constipation
___Diarrhea
___Vomiting
___Stomachaches
___Frequent fevers
___Sinus trouble
___Nose bleeding
___Bed wetting
___Allergies
___Serious blow to head
___Headaches
___Nightmares
___Thumbsucking
___Nail biting
___Epilepsy (seizures)
___Diabetes
___Lack of consciousness
___Chronic ear infections (more than 2 per year)
___Overtired or lacking pep
___Heart trouble
___Hyperactivity
___Medical problems (immediately after birth)
___Other physical problems (explain):_____

Is child presently on medication?___ What?_____

Has child had any significant injuries or hospitalization?_____

Is child healthy on day of screening?_____

II. **Hearing Assesssment**

Has child ever had any ear/hearing examination or treatment? (If yes...)

When_____By Whom_____Results_____

	Yes	No
A. Do you suspect any hearing problem?	___	___
B. Does your child:		
1. Seem to have difficulty in hearing?	___	___
2. Turn up the TV louder than other members of the family?	___	___
3. Seem to favor one ear over the other?	___	___
4. Jump or appear to be more startled than other if there is a sudden noise?	___	___
5. Seem to hear you if you talk in a whisper?	___	___
6. Make you talk loudly or repeat frequently?	___	___
7. Become confused in following more than two verbal directions at a time?	___	___
8. Have difficulty remembering things for a long time?	___	___
9. Have difficulty remembering things for a short time?	___	___

III. Language Development

At what age did your child first begin to speak? Give approximate age if you do not remember exact age:

First words_____ Phrases_____Sentences_____

Do you have any concerns about your child's speech or language? _____

_____

_____

IV. Visual Assessment

Has your child ever had a vision examination or treatment? ____Yes ____No

When_____ By Whom _____ Results_____

		Yes	No
A.	Do you suspect any vision problems?	___	___
B.	Does your child:		
1.	Seem to have difficulty seeing small lines?	___	___
2.	Seem to have a problem seeing things far away?	___	___
3.	Squint?	___	___
4.	Wear glasses?	___	___
5.	Have eyes that turn in?	___	___
6.	Have eyes that turn out?	___	___
7.	Sit very close to television?	___	___
8.	Rub eyes a lot?	___	___
9.	Turn head as to use primarily one eye?	___	___
10.	Lower one side of the head when looking at others?	___	___

V. Motor Development

At what age did your child walk? (Give approximate age if you do not remember exact age.) _____

	Do you feel your child has adequate large muscle coordination?	___	___
	Does your child:		
1.	Catch a ball thrown to him?	___	___
2.	Enjoy physical activities?	___	___
3.	Lose balance, trip and fall more often than normal?	___	___
4.	Have difficulty running?	___	___

VI. **Social Development**

Does your child:		Yes	No
1.	Have regular playmates the same age?	____	____
2.	Have difficulty getting along with other children?	____	____
3.	Prefer to play with other children instead of alone?	____	____
5.	Cry often?	____	____
6.	Have a bad temper?	____	____
7.	Enjoy cooperating with others?	____	____
8.	Become frequently irritated or moody?	____	____
9.	Become upset by changes in routine?	____	____
10.	Have difficulty dealing with family stress such as illness, death, or separation?	____	____
11.	Demand much individual adult attention?	____	____
12.	Accept discipline and limits?	____	____

VII. **Is there any other information that would help us understand this child?**

_____

_____

Has the child attended a pre-school? ___No ____Yes ____No. of years

Does your child know how to read? ___No ____Yes

Does your child know how to write? ___No _____ Yes

Please contact your child's' teacher if you want to provide any other information that was not included on this form.

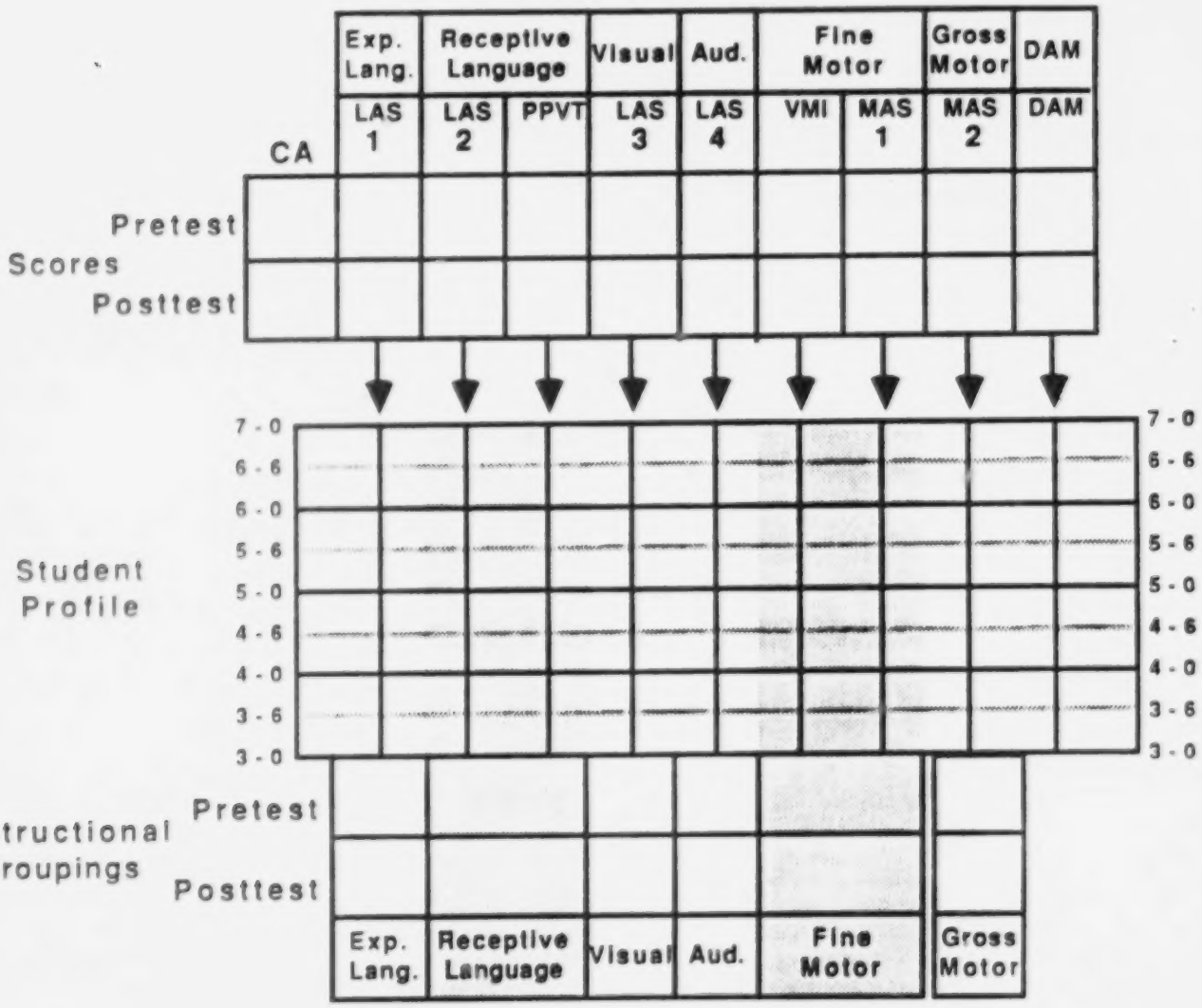
Thank you for your patience in filling out this questionnaire!

EISS Student Profile Sheet

Name _____ School _____

Birthday _____ Examiner _____ Grade _____

Pre-test (Mark in Blue) Date _____ C.A. _____ Post-test (Mark in Red) Date _____ C.A. _____



Key

CS- Considerable Strength
S - Strength
CA- At Chronological Age
At Risk:
MN- Moderate Need
CN- Considerable Need

Team Conferencing

Pre:

Post:

Observations: **Dominance:** Circle which hand: RIGHT LEFT NOT ESTABLISHED

BEHAVIORAL

- ☐ easily frustrated
- ☐ displays inappropriate behavior
- ☐ needs directions repeated more than once
- ☐ impulsive
- ☐ easily distracted by:
  _____visual
  _____auditory
- ☐ excessively...
  _____active
  _____inactive
  _____verbal
  _____non-verbal
- ☐ perseverates (repeats response again & again)

SPEECH/LANGUAGE

- ☐ speech intelligibility (note concerns)

MOTOR

Visual:
- ☐ fleeting eye contact
- ☐ poor tracking
- ☐ unable to copy with demonstrations

Tactile:
- ☐ overly sensitive to touch
- ☐ constantly seeks touch

Movement:
- ☐ awkward, clumsy
- ☐ poor balance
- ☐ extraneous limb movements
- ☐ inadequate protective responses
- ☐ difficulty crossing midline of body

EISS Language & Auditory Scale

Name _____ School _____

Birthday _____ Examiner _____ Grade _____

Pre-test (Mark in Blue) Date _____ C.A. _____ Post-test (Mark in Red) Date _____ C.A. _____

	Raw Score	Weighting Factor	Weighted Raw Score	Dev. Age Range Score
1. Verbal Expression				
A. Single Word Expressive Vocabulary ~~Items known.~~ *Phonemes not articulated.* balloon bottle chair cup dog kite knife leaf lock money pail/bucket ring rock/stone shoe sock wagon		x1		
B. Verbal Explanations 0 1 2 3 4		x4		
Subtotal Raw Score →				
2. Receptive Language				
A. Following Directions 1. 2-step 2. 3-step		x4		
B. Simple Story Comprehension 1.____ 2.____ 3.____		x3		
C. Critical Listening w/Picture Match 1.____ 2.____ 3.____		x3		
D. Prepositions 1. in 2. on 3. in front 4. behind (in back)		x2		
Subtotal Raw Score →				
3. Short Term Visual Memory				
A. Objects 1 2 3		x1		
B. Pictures 1 2 3		x1		
C. Picture Sequences 1 2 3		x1		
Subtotal Raw Score →				
4. Auditory Skills				
A. Short Term Auditory Memory 1 2 3		x3		
B. Sentence Repetition 1 2 3 4		x2		
C. Rhyming 1 2		x4		
Subtotal Raw Score →				

Observations/Comments:

Rev 5/89

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EISS Language & Auditory Scale - Spanish Version

Name _____ School _____

Birthday _____ Examiner _____ Grade _____

Pre-test (Mark in Blue) Date _____ C.A. _____ Post-test (Mark in Red) Date _____ C.A. _____

	Raw Score	Weighting Factor	Weighted Raw Score	Dev. Age Range Score
1. Verbal Expression				
A. Single Word Expressive Vocabulary ~~Items known.~~ Note errors in space provided. bomba* balloon____ tetera* bottle_____ silla chair_____ taza* cup_____ perro* dog_____ águila* kite_____ cuchillo knife_____ hoja leaf_____ candado lock_____ dinero money____ balde* pail_____ anillo* ring____ piedra* rock_____ zapato* shoe_____ calceta sock_____ carreta* wagon____		x1		
B. Verbal Explanations 0 1 2 3 4		x4		
Subtotal Raw Score →				
2. Receptive Language				
A. Following Directions 1. 2-step 2. 3-step		x4		
B. Simple Story Comprehension 1._____ 2._____ 3._____		x3		
C. Critical Listening w/Picture Match 1._____ 2._____ 3._____		x3		
D. Prepositions 1. in/en 3. in front/delante de 2. on/en 4. behind/detrás de		x2		
Subtotal Raw Score →				
3. Short Term Visual Memory		x1		
A. Objects 1 2 3		x1		
B. Pictures 1 2 3		x1		
C. Picture Sequences 1 2 3		x1		
Subtotal Raw Score →				
4. Auditory Skills		x3		
A. Short Term Auditory Memory 1 2 3		x2		
B. Sentence Repitition 1 2 3 4		x4		
C. Rhyming 1 2				
Subtotal Raw Score →				

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EISS Language & Auditory Scale - Vietnamese Version

Name _____ School _____

Birthday _____ Examiner _____ Grade _____

Pre-test (Mark in Blue) Date _____ C.A. _____ Post-test (Mark in Red) Date _____ C.A. _____

	Raw Score	Weighting Factor	Weighted Raw Score	Dev. Age Range Score
1. Verbal Expression				
A. Single Word Expressive Vocabulary ~~Items known.~~ Note errors in space provided. Bong bong* balloon____ Binh sua* bottle____ Ghe chair____ Cai ly* cup____ Con cho* dog____ Cai dieu* kite____ Con dao knife____ Chiec la leaf____ O khoa lock____ Tien money____ Cai chau* pail____ Chiec nhan* ring____ Vien da* rock____ Chiec giay* shoe____ Chiec vo sock____ Xe keo* wagon____		x 1		
B. Verbal Explanations 0 1 2 3 4		x 4		
Subtotal Raw Score →				
2. Receptive Language				
A. Following Directions 1. 2-step 2. 3-step		x 4		
B. Simple Story Comprehension 1.____ 2.____ 3.____		x 3		
C. Critical Listening w/Picture Match 1.____ 2.____ 3.____		x 3		
D. Prepositions 1. in/vao trong 2. on/tren 3. in front/truoc 4. behind/dang sau		x 2		
Subtotal Raw Score →				
3. Short Term Visual Memory		x 1		
A. Objects 1 2 3				
B. Pictures 1 2 3		x 1		
C. Picture Sequences 1 2 3		x 1		
Subtotal Raw Score →				
4. Auditory Skills		x 3		
A. Short Term Auditory Memory 1 2 3				
B. Sentence Repetition 1 2 3 4		x 2		
C. Rhyming 1 2		x 4		
Subtotal Raw Score →				

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EISS Integrated Motor Activity Scale

Name_____ School_____

Birthday_____ Examiner_____ Grade_____

Pre-test (Mark In Blue) Date _____C.A. _____ Post-test (Mark In Red) Date _____C.A. _____

	Raw Score	Dev. Age Range Score
1. Fine Motor		
A. Touch each finger right hand to each finger left hand		
B. Touch thumb to each finger, one at a time		
C. Wiggle rabbit ears		
D. Rabbit saying "hello"		
E. Snapping fingers audibly		
Subtotal Raw Score →		
2. Gross Motor		
A. Balancing on dominant foot, 10 sec.		
B. Balancing on non-dominant foot, 10 sec.		
C. Hopping on dominant foot, 10 hops in 15 sec.		
D. Hopping on non-dominant foot, 10 hops in 20 sec		
E. Hopping 25 times in 10 seconds		
F. Skipping10 ft. with reciprocal arm swing		
G. Trapping beanbag		
H. Tossing beanbag		
I. Catching beanbag		
J. Tossing/catching beanbag		
Subtotal Raw Score →		
3. Dominance: Observe handedness and circle: RIGHT LEFT NOT ESTABLISHED		

Observations:

Visual:
- ☐ fleeting eye contact
- ☐ poor tracking
- ☐ unable to copy with demonstrations

Tactile:
- ☐ overly sensitive to touch
- ☐ constantly seeks touch

Movement:
- ☐ awkward, clumsy
- ☐ poor balance
- ☐ extraneous limb movements
- ☐ inadequate protective responses
- ☐ difficulty crossing mid-line of body

EISS Readiness Skills Checklist

Name_____ School_____

Birthday _____ Examiner_____ Grade_____

Pre-test (Mark In Blue) Date _____C.A. _____ Post-test (Mark In Red) Date _____C.A. _____

These items are commonly mastered in Kindergarten. This criterion referenced checklist is intended to assist the classroom teacher in making instructional decisions. Mark the items correct. Use the column at the right to note the child's instructional needs.

1. Readiness Skills	Note Areas of Need
A. Shapes ☐ circle ☐ triangle ☐ square ☐ rectangle	
B. Time ☐ first ☐ last	
C. Color ☐ red ☐ blue ☐ orange ☐ black ☐ yellow ☐ green ☐ purple ☐ brown	
D. Money ☐ penny ☐ dime ☐ nickel ☐ quarter	
E. Math 1) rote counting to_____ 2) 1:1 correspondence _____ 3) Rational count ☐ 4) Addition (2+2) ☐ 5) Zero ☐	
2. Language-Related Concepts	
A. Association	
B. Exclusion	
C. Categories	
D. Opposites & Analogies	

EISS Readiness Skills Checklist - Spanish Version

Name _____ School _____

Birthday _____ Examiner _____ Grade _____

Pre-test (Mark in Blue) Date _____ C.A. _____ Post-test (Mark in Red) Date _____ C.A. _____

These items are commonly mastered in Kindergarten. This criterion referenced checklist is intended to assist the classroom teacher in making instructional decisions. Mark the items correct. Use the column at the right to note the child's instructional needs.

1. Readiness Skills		Note Areas of Need
A. Shapes	☐ circle/círculo ☐ triangle/triángulo ☐ square/cuadrado ☐ rectangle/rectángulo	
B. Time	☐ first ☐ last	
C. Color	☐ red rojo ☐ blue azul ☐ orange anaranjado ☐ black negro ☐ yellow amarillo ☐ green verde ☐ purple morado ☐ brown café	
D. Money	☐ penny ☐ dime ☐ nickel ☐ quarter	
E. Math	1) rote counting to _____ 2) 1:1 correspondence _____ 3) Rational count ☐ 4) Addition (2+2) ☐ 5) Zero/Cero ☐	
2. Language-Related Concepts		
A. Association		
B. Exclusion		
C. Categories		
D. Opposites & Analogies		

Rev.5/89

EISS CLASS MODALITY GRID

Class:_____ Teacher:_____ School:_____

	LANGUAGE	VISUAL	AUDITORY	FINE MOTOR	GROSS MOTOR
Considerable Strength (CS)					
Strength (S)					
At Chronological Age (CA)					
Moderate Need (MN)					
Considerable Need (CN)					

EARLY INTERVENTION FOR SCHOOL SUCCESS

Child's Name_____ Teacher_____

School_____ District_____

Date Entered in Program_____ Exit Date_____

SKILLS CHECK LIST

The skills checklist provides a developmental sequence of pre-academic skills for each modality area. Based on screening and conferencing results, the Student Profile Sheet indicates modality areas where EISS instruction is prescribed. Date as skill is introduced and again as skill is observed to be mastered by the child. Some children may master the skill prior to kindergarten. Other children may master the skill during kindergarten or first grade.

SKILLS	INTRO. DATE OF SKILL	COMMENTS	DATE SKILL OBSERVED
GROSS MOTOR COORDINATION Child is able to:			
1. Walk forward, backward and sideways on tape footprints			
2. Imitate body movements			
3. Descend steps with alternating feet			
4. Identify and use body parts			
5. Run, jump and hop			
6. Throw and catch ball with limited control			
7. Manipulate body in space both directionally and laterally			
8. Walk forward, backward and sideways on balance beam and balance on balance beam			
9. Gallop, skip and jump rope			
FINE MOTOR COORDINATION Child is able to:			
1. Manipulate small objects (with both hands)			
2. Hold crayons and pencils appropriately (scribbles)			
3. Hold scissors appropriately and cut with them			
4. Draw a man with six body parts			
5. Trace, copy and draw basic shapes			
6. Lace shoes, tie knots and fold triangles from square			
7. Finish incomplete designs			
8. Write letters			
9. Write numerals 1-10 in recognizable form			
AUDITORY Child is able to:			
1. Listen without interrupting while maintaining eye contact			
2. Follow one or easy two-step directions			
3. Recall familiar nursery rhymes, poems or alliterative phrases			
4. Identify and recognize the difference in volume, tone, quality and type of sound			
5. Listen to and then retell a story in sequence			
6. Follow instructions in sequence (2-3 parts)			
7. Repeat a pattern or series of sounds, words or numbers			
8. Finish an incomplete sentence with an appropriate word			
9. Match and recall rhyming words			
10. Match and identify alike and different letter sounds			
11. Match and identify beginning, ending and middle sounds (placement)			

SKILLS	INTRO. DATE OF SKILL	COMMENTS	DATE SKILL OBSERVED
LANGUAGE- Child is able to: 1. Identify and name common objects and pictures			
2. Use singular and plural forms of common words			
3. Communicate thoughts and needs in complete sentences of four to six words			
4. Recognize and name basic colors, shapes and sizes			
5. Dictate simple sentences about objects and illustrations			
6. Tell stories in sequence with or without the aid of pictures			
7. Understand the meaning of basic concepts			
8. Recognize and name letters and some words			
9. Interpret story situations and predict story outcomes			
VISUAL- Child is able to: 1. Follow fixed and moving objects with eyes without moving his or her head			
2. Identify likenesses and differences of objects and pictures			
3. Match color, shape and size			
4. Identify likenesses and differences and recall basic colors, shapes and sizes			
5. Put simple puzzles together (6 to 8 pieces)			
6. Identify and name missing items from memory			
7. Identify and locate objects from a complex background (figure-ground)			
8. Classify and sort pictures in sequence by memory			
9. Place 2 to 4 items or pictures in sequence by memory			
10. Repeat patterning of 3 or 4 items			
11. Arrange pictures in sequence of events			
12. Identify, name, match and sequence letters			
13. Match upper and lower case letters			
14. Match and name quantitative concepts with numerals, numerals with numerals, and arrange numerals in order			

EARLY INTERVENTION FOR SCHOOL SUCCESS

DEMONSTRATION SITES

1989-90

District/County	School	Classes	Contact
Buckeye UESD El Dorado	Buckeye Elementary	Jan Hendryx Marguerite Mink	Jan Hendryx 916/677-2277
Elk Grove USD Sacramento	Foulks Ranch Elementary	Sue Ryan Sherri Carlisle	Sue Ryan and Sherri Carlisle 916/686-7705
Long Beach USD Los Angeles	Edison Elementary	Kim Baril Carmen Hedges Margaret Towner Norma Goguen	Kim Baril 213/5908481
Montebello USD Los Angeles	Wilcox Elementary	Lavonne Sherman Dinah Pendergast Trudie Nakamura Ana Gutierrez	Todd Macy 213/728-1833
Oxnard SD Ventura	Marina West Elementary	Barbara Leukuma Lupe Lopez	Marian White 805/487-3918 X296
Richland SD Kern	Richland Primary	Marlene Wilson Sandy Thomas Jan Nelson	Marlene Wilson 805/746-3317
Saddleback Valley Orange	Santiago Elementary	Grace Blagdon Barbara Travers Melodie Gaebel Lynn Miller	Barbara Travers 714/586-2820
San Leandro USD Alameda	Wilson Elementary	Bonnie Ho Liz Marshall	Bonnie Ho and Karen Berry 415/667-3581/3587
Vista USD San Diego	Monte Vista Elementary	Paula Keen Carol Hamm Maura Korbin	Paula Keen 619/726-0410

END

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Office of Education
Research and
Improvement (OERI)

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Date Filmed

March 21,1991